

Recreation Resources

Appendix D

**Trinity River Mainstem
Fishery Restoration**

October 1999

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Appendix D

1.0 RECREATION RESOURCES

1.1 RIVERINE

1.1.1 Affected Environment

1.1.1.1 Trinity River Basin

Management Jurisdiction. The Trinity River Basin occupies portions of Trinity and Humboldt Counties and includes the Trinity River, its tributaries, and Trinity and Lewiston Reservoirs. The Trinity River, from Lewiston downstream to Weitchpec, is about 110 miles long and spans several jurisdictions. Between Lewiston and Helena, portions of the river that cross federal land are managed by the U.S. Bureau of Land Management (BLM). Between Helena and the confluence with New River, the river is managed by the U.S. Forest Service (USFS), Shasta-Trinity National Forest Division. Between New River and the Hoopa Valley Indian Reservation boundary, the river is managed by the USFS Six Rivers National Forest Division. The river, as it crosses the Hoopa Valley Indian Reservation to Weitchpec, is managed by the Hoopa Valley Tribe. Portions of the river that cross private land are within the jurisdiction of Trinity or Humboldt Counties.

Recreation Resources and Opportunities. Developed recreation areas along the Trinity River consist of private campgrounds, resorts, and lodges; public campgrounds and picnic areas; and fishing access sites. About 34 developed recreation sites are located within a 0.5-mile corridor of the Trinity River. More than 200 access sites were inventoried in 1979 between Lewiston Dam and Weitchpec (U.S. Bureau of Reclamation, 1994). Recreation activities on the Trinity River that are water-dependent or are directly enhanced by the river include boating, kayaking, canoeing, rafting, inner-tubing, fishing, swimming, wading, camping, gold panning, nature study, picnicking, hiking, and sight-seeing. Except for Burnt Ranch Gorge downstream of China Slide, the river is suitable for rafting. Areas upstream of Junction City are best for rafting in spring when flows are high. More than 100 access points for rafting activities are available along the Trinity River. Preferred river reaches for kayaking are the 24-mile reach between the North Fork and Cedar Flat and portions of the river downstream of Willow Creek. The most popular reaches for open canoes are the 5-mile reach from the North Fork to Junction City and the 6-mile reach from the South Fork to Willow Creek. Canoeing on the 8.5-mile reach from the North Fork to Big Bar is generally suitable for special white-water canoes with covered decks (U.S. Bureau of Reclamation, 1994).

Fishing for chinook salmon, steelhead, and rainbow and brown trout is a major recreational activity on the Trinity River during October and November. Swimming, wading, and beach use occur between May and September. Swimming is popular at several sites: Steel Bridge

Pool, Painted Rock (near Douglas City Campground), Steiner Flat Area, Junction City Camp, Pigeon Point Campground, Tish Tang Campground, and dispersed locations along State Route 299 (U.S. Bureau of Reclamation, 1994).

Recreation Use and Economics. An estimated 214,000 recreation visitor days (RVDs) were made to the Trinity River in 1995. Based on information from the Trinity River User Survey conducted in 1993 and 1994 by the Biological Resources Division (BRD) of the U.S. Geological Survey (USGS), the most popular activities on the Trinity River are boating, swimming, hiking, and fishing. The value (or net economic benefit) to recreationists who participate in different river activities is estimated to be \$36 per day for boating, \$26 per day for swimming, \$65 per day for fishing for salmon and steelhead, and \$33 per day for off-river activities such as hiking. Using these average per-day values, the total benefits to recreationists who used the Trinity River in 1995 is estimated at \$9.9 million.

Within the Shasta-Trinity National Forest Big Bar Ranger District, the number of boating days along the Trinity River between Memorial Day and Labor Day for rafting, kayaking, and canoeing purposes was approximately 5,000 days in 1991; 9,000 days in 1992; 7,000 days in 1993, and 15,000 days in 1994. Between 25 and 40 percent of this use is by commercial outfitters (Williams pers. comm).

Landscape Description. The Trinity River Basin is characterized by mountainous, densely forested terrain with numerous deep canyons. The region is sparsely populated and lacks major urbanized areas. Cultivated agricultural areas are limited and the few that do exist are widely scattered.

Federal Wild and Scenic River Designation. The entire mainstem Trinity River was designated into the National Wild and Scenic Rivers System in 1981. All rivers designated as either wild, scenic, or recreational by the federal government or the State of California are regarded as having high scenic quality. The reach of the Trinity River downstream from Trinity Reservoir is classified as having distinctive scenic quality and a high scenic quality (U.S. Bureau of Reclamation, 1994). About 13.5 miles of the river were classified as scenic, and about 97.5 miles of the river were classified as recreational. The river is administered by USFS (Six Rivers National Forest and Shasta-Trinity National Forest), BLM, the California Resources Agency, and the Hoopa Valley Indian Reservation (Palmer, 1993). The primary reason for the designation of this river was its anadromous fishery value (U.S. Forest Service, 1995a). The Shasta-Trinity National Forest classifies the Trinity River from Helena downstream to Cedar Flat as recreational, and from Cedar Flat downstream to the river's confluence with New River as scenic (U.S. Forest Service, 1995c). The Six Rivers National Forest classifies the portions of the Trinity River within its jurisdiction as recreational (U.S. Forest Service, 1995a).

The goals of the USFS are to protect the scenic and recreational portions of the Trinity River's quality in a free-flowing condition, manage the river and its immediate environment, protect and enhance the values (its anadromous fishery) for which the river was designated. The USFS maintains the river environment in a natural state for anadromous fisheries while providing for recreation opportunities that do not adversely affect the values for which the river segments were nominated (U.S. Forest Service, 1995a). The USFS desires the recreational portions of the river to remain generally natural and riverine in appearance. Some shoreline development is allowed. Portions of the recreational river corridors within

the riparian reserve management area will be managed so as to be consistent with the management goals and desired condition of the riparian reserves (U.S. Forest Service, 1995a).

A wild and scenic river management plan was prepared for the Trinity River in 1996 (pers. comm. with Charlie Fitch, 1998). The plan, *Implementation Guide for Three River Segments of the Wild and Scenic Rivers*, addresses resource protection, development of land and facilities, user capacities, and other management practices. The plan lists a series of actions for facilities, trails, management strategies, visitor information, and periodic review of visual quality of certain sites (North State Resources, Inc., 1996).

BLM manages its lands along the Trinity River for recreational, cultural, wildlife, timber, and visual values. This includes maintaining Roaded Natural and Semi-primitive Motorized Recreational Opportunity Spectrum (ROS) Classes, maintaining a Visual Resource Management (VRM) Class II, maintaining existing developed recreation sites at a level consistent with the ROS class, and ensuring that timber harvest levels are consistent with BLM's Redding Resource Management Plan dated 1993. The standards are in accordance with a recreation-designated river pursuant to the Wild and Scenic Rivers Act (BLM, 1983; 1992). BLM expects to begin preparing a wild and scenic river management plan for the portion of the river it manages after the permanent flow allocation in the river is determined (pers. comm. with Eric Morgan, 1998a).

State Wild and Scenic River Designation. The California Wild and Scenic Rivers System consists of rivers and river segments established by legislative action because of the extraordinary scenic, recreational, fishery, or wildlife values that the rivers or segments possess in their free-flowing condition. Similar to the national system, rivers are classified as wild, scenic, or recreational. Management requirements and restrictions are similar to those of the national system. The mainstem Trinity River is classified as recreational and scenic in the California Wild and Scenic Rivers System.

Scenic Areas. Portions of the Trinity River Basin exhibit distinctive scenic quality characterized by features such as sharp isolated peaks; deep canyons; patterns and combinations of seasonal vegetation; and water bodies including waterfalls, pools, unusual shoreline configurations, high water clarity, and a high degree of visibility.

Other portions of the basin exhibit common scenic quality. Features are typified by broad slopes; subordinate rounded hills; outcrops lacking distinctive configuration and color; vegetation having some visual variety; and water bodies including rapids, pools, common shoreline configurations, medium water clarity, and moderate visibility.

The basin has several wilderness areas and numerous designated scenic lookouts and viewpoints. Wilderness areas within the basin include the Trinity Wilderness Area, Chancelulla Wilderness Area, and Trinity Alps Wilderness Area.

Scenic Highways. The State of California and other agencies designate highways having exceptional scenic qualities and/or panoramic vistas as "scenic." No state highways within the basin are designated as scenic. However, the USFS has designated State Route 299 (SR299) in the basin as a National Scenic Byway (CSAA, 1995). A north-south trending highway located west of Trinity Reservoir in Trinity County is a Trinity Heritage National

scenic highway that is eligible for state scenic highway designation (U.S. Bureau of Reclamation, 1994). In addition, SR36, SR96, and SR299 are included by the State of California in its Master Plan of State Highways Eligible for Official Scenic Highway Designation (U.S. Forest Service, 1995b).

Recreation and Aesthetic Resource Management. The federal government owns and manages about 72 percent of the land within Trinity County. The remaining land is administered by Trinity County pursuant to goals and objectives presented in the Trinity County General Plan. The Trinity River has several designations in the General Plan, including Intensive Recreation Area; Intensive Recreation Reservoir Site; and Urban Recreation Area. The County's objective is to reserve land for recreational facilities, as well as encourage private recreational development and other open space uses that are characteristic and beneficial to the local residents, while meeting current and future needs.

Trinity County regulates the Wild and Scenic River corridor with four zoning ordinances: Open Space District, Scenic Conservation Overlay Zone, Flood Hazard Zoning District, and Floodplain Management Ordinance. These ordinances cite specific development standards and establish permitted uses within the corridor (North State Resources, Inc., 1996).

Humboldt County regulates the Wild and Scenic River corridor with a Wild and Scenic General Plan designation, a Hazards and Resource section in the Willow Creek Community Plan, and a Flood Plain zone district. Both the General Plan and Community Plan establish goals and polices for the area; the zone district cites specific development standards within the zone (North State Resources, Inc., 1996).

1.1.1.2 Lower Klamath River Basin/Coastal Area

Recreation Resources and Opportunities. The primary recreational use along the lower Klamath River is sport salmon and steelhead fishing. Camping, hiking, and boating (drifting, inner-tubing, and canoeing) also occur.

The coastal area includes the area near Monterey north to Astoria, Oregon. Ocean fishing is the primary coastal recreational use; swimming and general beach use are also popular.

Recreation Use and Economics. In 1995, about 8,000 angler days were spent sportfishing for salmon and steelhead along the lower Klamath River. Based on an estimated value of \$65 per day, the angler benefits of sport fishing for salmon and steelhead along the lower Klamath River were \$579,000 in 1995. About 415,000 sportfishing trips for chinook and coho salmon originated from the Pacific coast region (coastal waters of California and Oregon) in 1995, with more than 90 percent of them originating from California ports. Private fishing vessels accounted for about 60 percent of total sportfishing trips in the region; about 40 percent of the trips were from charter vessels (Pacific Fishery Management Council, 1998).

1.1.1.3 Central Valley

The Sacramento and San Joaquin Rivers provide a variety of recreational opportunities that are primarily water-dependent and include boat and shore fishing, pleasure boating and

rafting, beach use, and swimming. In addition, water-enhanced activities such as camping, picnicking, and sight-seeing occur along the rivers.

The combined sportfishing use of these two river systems was estimated to be 349,000 RVDs in 1992. Based on an average per-day value of \$20, this level of sportfishing activity generated an estimated \$6.98 million in angler benefits in 1992. Total 1980 use associated with the river is approximately 1.2 million RVDs (U.S. Bureau of Reclamation, 1997b).

1.1.2 Environmental Consequences

1.1.2.1 Methodology

Two methodological approaches were used to assess impacts: one to estimate effects on recreation opportunities in the Trinity River Basin and Lower Klamath River Basin/Coastal Area, and one to estimate changes in recreation use and benefits. These two approaches vary substantially. The recreation opportunities analysis measures specific impacts to recreation opportunities based on weekly flow releases from Lewiston Reservoir during the primary recreation season. The recreation use and benefits analysis predicts the overall effects to recreation use and benefits on an annual basis based on average flow conditions in two water-year conditions (normal and dry). Use and benefits results are presented in this Technical Appendix for the normal and dry water-year analysis.

In addition to evaluating the effects on recreation opportunities and use and benefits, the project alternatives were evaluated for consistency with Trinity and Humboldt County recreation objectives and State/Federal Wild and Scenic River designations. Flow-related impacts to riverine recreation opportunities and use within the Central Valley were considered to be negligible because of the minor effect Trinity River District (TRD) changes would have on Sacramento River¹ and San Joaquin River flows in regards to recreational opportunities and use. As listed in the Programmatic Environmental Impact Study (PEIS) Technical Appendix, the threshold for boating activities on the Sacramento River are 2,500 to 12,000 cfs. These threshold flow ranges are not exceeded under any of the project alternatives. See Section 3.5, Fishery Resources for impacts to Central Valley sportsfishing. Impacts to recreation opportunities, use and benefits in the Central Valley are not discussed under the alternatives.

Recreation Opportunities Methodology. The mainstem of the Trinity River is the primary focus of the recreational opportunities analysis. Trinity River flows are most influenced by Lewiston releases in the summer months given tributary flow is generally not much of a factor during this period. Many recreational opportunities, in particular white-water (i.e., kayakers and rafters) are most prevalent downstream of the rivers confluence with the North Fork Trinity River. Impacts to recreational opportunities within the lower Klamath River Basin, aside from sportfishing, are considered to be less than significant because river levels in these areas are minimally influenced by the Lewiston Dam releases. (Impacts to ocean sportfishing are discussed in Section 3.5.4, Ocean Fishery Economics.)

¹ TRD exports to Sacramento River flows amount to .01 percent of the Sacramento River's volume over the long-term.

The evaluation of impacts to riverine recreation opportunities along the Trinity River consisted of a multi-step process. Significant flow thresholds were developed in conjunction with the USFS, BLM, and a commercial outfitter to identify effects on water-dependent and water-enhanced recreational activities on the Trinity River (i.e., white-water rafting or kayaking, swimming, wading, fishing, and camping). A "Preferred/Threshold Flow" range was developed for each of the recreational activities. The preferred/threshold flow range is the range within which a specific user group (e.g., white-water kayakers) prefers to participate in a particular recreational activity on the Trinity River. River flows outside this range are assumed to adversely affect opportunities for the specific recreational activity. The evaluation was limited to the primary recreation season, which was defined as Memorial Day to Labor Day (i.e., the last week of May to the end of the first week in September). Weekly flows were reviewed for each water-year class (extremely wet, wet, normal, dry, and critically dry) for each alternative². If the preferred flows would not be met within a particular week or series of weeks for an alternative, it was assumed that the associated recreational opportunity would be adversely affected, resulting in a significant impact. The alternatives were compared to the No Action Alternative.

Recreation Use and Economics Methodology. The methodology for determining recreation use and benefits within the Trinity River Basin and the Lower Klamath River Basin/Coastal Area is based on river flow and fish population conditions. Annual recreation use relationships were estimated for four activities that occur along the river: boating, swimming, fishing, and hiking and other river-enhanced activities (i.e., off-river activities). The relationship of river flow and fish populations to these activities was generally found to be positive, implying the greater the flow/fish population, the greater the expected in-river recreation use.

Data collected by the National Biological Service (now called Biological Resources Division and located within USGS) in a direct-mail survey were used to quantify the relationship between river visitation and river flow and salmon populations. Predicted data on river flows from the Project Simulation Model (PROSIM) were used in the boating, swimming, and off-river activity equations³. Information on the number of returning salmon and steelhead (see Section 3.5.1) were used to predict the number of fishing trips that would be taken under each of the alternatives. Equations (1) through (4) were used to evaluate these relationships:

- (1) Fish Trips_i = A0 - A1(Distance_i) + A2(Fish) + A3(DEMOG_i)
- (2) Boat Trips_i = B0 - B1(Distance_i) + B2(Flow) + B3(DEMOG_i)
- (3) Swim Trips_i = C0 - C1(Distance_i) + C2(Flow) + C3(DEMOG_i)
- (4) Off-River Trips_i = D0 - D1(Distance_i) + D2(Flow) + D3(DEMOG_i)

Data on fishing for trout and salmon were pooled to form an angler data set used in equation (1). Boating trips included all forms of boating activity, including canoeing, rafting, and kayaking.

² The flow hydrographs were used for the opportunities analysis because this weekly data allowed for detailed evaluation of impacts to recreation opportunities.

³ Monthly data from PROSIM were used in the recreation use analysis because the use estimating models were specified in terms of monthly hydrology.

Off-river activities included hiking, camping, nature study, and photography along the Trinity River. Other studies (e.g., Daubert et al., 1979) have shown that instream flow improves the quality of such off-river recreation-related uses.

Demographic (DEMOG) variables include age and gender. The characteristics of recreation trips described in the survey conducted by BRD suggest that the travel cost method of analysis is applicable to these data. Nearly 90 percent of all visitors responding to the survey were on single-destination trips. To meet the assumptions of the travel cost method for estimating recreation-related use, the remaining 10 percent of visitors were deleted from the data for the regressions. The number of trips taken varied widely, with an average of six trips per year and a mode of one trip.

Review of the aggregated data suggests that a systematic relationship exists between flow or fish population scenarios described in the survey and the number of trips that respondents indicated they would take. The number of trips correlate with changes in flow with a fairly regular pattern.

The estimated coefficients in the regression equations are shown in Table D-1. The coefficients on the important policy variables (flow or fish populations) in the regression equations are significant at the 99 percent level. Although the adjusted R² statistics are low, this is not unusual with an analysis using individual, cross-sectional data. The F statistics are all significant at the 99 percent level.

The estimated equations were used to predict the number of activity-specific trips per person that would be taken under flow and fish population conditions corresponding with the alternatives. Predicted data on stream hydrology from the PROSIM model were used in the boating, swimming, and off-river activity equations. Different flow conditions in the upper and lower reaches of the river were used in the equations. Historical information on flows were used to estimate the contribution of flows below the North Fork of the Trinity River. Information on the number of returning salmon and steelhead provided by the Trinity River Restoration Fish Team were used with historical information on the number of hatchery-bred salmon and steelhead to predict the number of fishing trips per person that would be taken under the No Action Alternative and with-project alternatives.

The analysis was conducted using average flow data for dry-water years (1928 to 1934) and average-water years (1922 to 1991). A wet-year analysis was not conducted because it was believed that results would be similar to average-year conditions. In addition, because fish numbers were developed only for average conditions, the analysis of sportfishing effects did not consider different water-year conditions.

The predicted number of trips per person was then used, along with the estimated number of visitors to the Trinity River in 2020, to estimate the total number of trips by alternative. This number was derived by first estimating the number of visitors to the Trinity River in 1994 based on use estimates reported in the Affected Environment section of this technical appendix and information on the average trip duration from the Trinity River User Survey. The number of visitors in 1994 was then multiplied by the change in projected population to develop estimates for 2020. The forecasted change in population for the two-county region (residents) and for the state (non-residents) was used to estimate the number of separate persons visiting the Trinity River in 2020 (17,655).

TABLE D-1
Results of Travel Cost Model Regressions for the Trinity River

Variables	Fishing	Boating	Swimming	Off-river Activities
Constant (T-Statistic)	-7.43 (-21.66)	-3.61 (-7.52)	-2.17 (-4.47)	-0.246 (-.246)
DISTANCE	-0.000439 (-6.45)	-0.000634 (-4.94)	-0.00172 (-7.02)	-0.00086 (-4.62)
LFFLOWS	N/A	1.00 (13.99)	0.771 (7.28)	0.868 (10.14)
LFISH	0.659 (24.74)	N/A	N/A	N/A
RATETRI	0.171 (12.25)	0.169 (4.89)	0.153 (4.14)	0.061 (1.79)
ANOTHER	-0.098 (-3.48)			-0.2728 (-4.47)
GUIDE	0.138 (3.28)	0.634 (6.97)	N/A	N/A
AGE	-0.0057 (-3.07)	-0.024 (-5.95)		-0.032 (-6.52)
GENDER	-0.1261 (-1.65)	-0.343 (-3.18)	-0.293 (-2.02)	-0.383 (-3.11)
R2	.194	.26	.16	.22
F Statistic	121.98	61.65	30.5	32.67
N =	3547	1057	638	701

Where:

DISTANCE is the one-way miles to the river from a respondent's home.

LFFLOWS is the log of percent of flows that remain in the river.

LFISH is the log of the number of fish (salmon and steelhead) returning to the river.

RATETRI is the rating of the Trinity River as compared to other recreation sites.

ANOTHER is the likelihood of using another recreation site, where 1 is not likely and 3 is very likely.

GUIDE is whether the respondent used a commercial guide or outfitter (1=used guide).

GENDER was coded in the survey as 1= male and 2=female.

Economic benefits were estimated using average per-day values derived from a study by Walsh et al. (1992). The study compiled more than 250 estimates of recreation benefits for different activities and developed mean and median estimates for the activities. The values used in this analysis are as follows: fishing, \$65 per day; boating, \$36 per day; swimming, \$26 per day; and hiking and other off-river activities, \$33 per day. The values found in the Walsh et al. report were indexed to 1997. In addition to providing benefits to Trinity River users, restoration of the Trinity River would provide benefits to other members of the public who place value on this improvement. This type of value, which is typically referred to as non-use or existence value, is described in Attachment A to this technical appendix. These values are not described in the Environmental Consequences section because separate values could not be developed to differentiate the alternatives.

1.1.2.2 Significance Criteria

Flow thresholds were developed in conjunction with the USFS, BLM, and a commercial outfitter to identify adverse effects on existing water-dependent and water-enhanced

recreational activities on the Trinity River (Table D-2). Deviations from these preferred flows compared to the No Action Alternative were considered significant. In addition to the flow thresholds, the following criteria were also used to determine significant impacts to riverine recreation:

- Substantial increase in turbidity so as to negatively impact recreation aesthetics.
- Incompatibility with the Federal or State Wild and Scenic River designation, defined as jeopardizing the river's anadromous fishery resources or scenic and recreational qualities.
- Non-compliance with Trinity and Humboldt Counties recreation resource objectives.

Ten percent or greater reduction in recreation use compared to No Action levels. (This threshold was established based on the expected margin of error in the analytical tools used in the assessment, and because 10 percent suggests a fairly substantial reduction in recreation quality.)

TABLE D-2
Preferred Recreation Flow Ranges/Thresholds^a

Activity	Preferred Flow Ranges (cfs)
Canoeing	200-1,500
Drift-boat and drift-raft fishing	200-1,500
White-water (i.e., kayaking and rafting)	300-8,000
Recreational mining	350-600
Shore fishing	300-800
Swimming/inner-tubing	150-800
Wading	300-800
Campground Use Precluded	Flow Threshold
Steel Bridge, Douglas City	8,000 or greater
Steiner Flat, North Fork	10,000 or greater
Poker Bar	12,000 or greater

^a Trinity River flows in the Preferred Flow/Threshold range during the primary recreation season (Memorial Day to Labor Day) as measured at the Lewiston gage.

1.1.2.3 No Action Alternative

Trinity River Basin. Trinity River flows associated with the No Action Alternative are within the preferred range for drift-boat fishing, drift-raft fishing, canoeing, white-water kayaking/rafting and camping at campgrounds along the river throughout the primary recreation season in all water-year classes (Table D-3). However, shore fishing, swimming/inner-tubing, wading, and recreational mining are constrained by flows during a two to three week period in late May and early June. Recreation use to the year 2020 is expected to increase from current conditions at a rate similar to population growth in the northern California area. Annual recreation benefits in the year 2020 are estimated to be \$14.5 million during average water conditions (Table D-4). Boating⁴ accounts for about 37 percent of the total benefits, with swimming and fishing accounting for 26 percent and 19 percent, respectively. Recreation use from current conditions to the year 2020 is expected to increase

⁴ Includes all forms of boating, including kayaking, canoeing, and rafting.

at a rate similar to population growth in the northern California area. Annual recreation benefits in the year 2020 are estimated to be \$14.5 million during average water conditions (Table D-4). Boating⁵ accounts for about 37 percent of the total benefits, with swimming and fishing accounting for 26 percent and 19 percent, respectively.

This alternative is marginally consistent with Trinity and Humboldt Counties' recreation objectives and State/Federal Wild and Scenic River designations. The alternative would generally not interfere with riverine recreation activities, would maintain the free-flowing condition of the river⁶, and would not adversely affect (compared to current levels) the value for which the river was designated Wild and Scenic (the anadromous fishery).

Lower Klamath River Basin/Coastal Area. Annual sportfishing use and benefits of the lower Klamath River under the No Action Alternative consist of 13,200 visitor days and a recreation benefit of \$858,000 (Table D-4).

1.1.2.4 Maximum Flow Alternative

Trinity River Basin. Under the Maximum Flow alternative, many recreational activities, including canoeing, drift-boat fishing, drift-raft fishing, recreational mining, wading, shore fishing, swimming and inner-tubing are significantly impacted for multiple weeks during the primary recreation season because Trinity River flows are higher than the preferred threshold range during this period. Generally, these recreation activities are impacted by high water flows in the earlier half of the primary recreation season. However, white-water kayaking and rafting, as well as campground use is not constrained at any time during any water-year class under this alternative (Table D-3). The specific weeks and water-year classes in which recreation activities are constrained are outlined below.

Canoeing: The preferred flow range for canoeing on the Trinity River is 200-1,500 cfs. Under the Maximum Flow alternative, canoeing will be constrained by flows above 1,500 cfs for the first 8 weeks of the primary recreation season in extremely wet and wet water years, or approximately the last week in May to mid-July. In normal and dry water years, canoeing activities on the Trinity River are constrained for the first 6 weeks of the season. In critically dry water years, canoeing is constrained the first five weeks of the season.

Campground Use: The preferred flow ranges for campgrounds along the Trinity River are 12,000-8,000 cfs or less. Under the Maximum Flow Alternative, no campground use is constrained during the primary recreation season.

Drift-boat Fishing: The preferred flow range for drift-boat fishing on the Trinity River is 300-1,500 cfs. Similar to canoeing, under the Maximum Flow alternative, drift-boat fishing is constrained by high flows for the first 8 weeks of the primary recreation season in extremely wet and wet water years. In normal and dry water years, drift-boat fishing is constrained the first six weeks of the season by flows above the 1,500 cfs preferred threshold range. In critically dry water years, drift-boat fishing is constrained the first 5 weeks of the recreation season.

⁵ Includes all forms of boating, including kayaking, canoeing, and rafting.

⁶ "Free-flowing" as defined by the National Wild and Scenic Rivers Act prohibits the authorization of future construction of dams, diversion works, and any other minor structures along the river corridor.

TABLE D-3
Riverine Recreation Opportunities – Trinity River

Resource Concern	Preferred Flow Range (cfs)	No Action/Existing Conditions	Recreation Opportunity Constraints During the Primary Recreation Season ^{a, b}					Mechanical Restoration	State Permit
			Maximum Flow	Flow Evaluation	Percent Inflow				
Canoeing	200-1,500	No constraint ^c	Constrained 8 weeks in extremely wet and wet years.	Constrained 7 weeks in extremely wet , wet years and normal years.	Constrained 8 weeks in extremely wet , wet , normal , and dry years.	No constraint	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.		
			Constrained 6 weeks in normal and dry years.	Constrained 1 week in dry years.	Constrained 10 weeks in critically dry years.				
			Constrained 5 weeks in critically dry years.	Not constrained during critically dry years.					
Camping Steel Bridge, Douglas City Steiner Flat, North Fork	8,000 or less	No constraint	No constraint	Constrained 1 week in extremely wet years.	No constraint	No constraint	No constraint		
			No constraint	No constraint	No constraint	No constraint			
			No constraint	No constraint	No constraint	No constraint			
Drift-boat fishing	300-1,500	No constraint	Constrained 8 weeks in extremely wet and wet years.	Constrained 7 weeks in extremely wet , wet and normal years.	Constrained 9 weeks in extremely wet , wet and normal years.	No constraint	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.		
			Constrained 6 weeks in normal and dry years.	Constrained 1 week in dry years.	Constrained 10 weeks during dry years.				
			Constrained 5 weeks in critically dry years.	Not constrained during critically dry years.	Constrained 12 weeks during critically dry years.				
Drift-raft fishing	200-1,500	No constraint	Constrained 8 weeks in extremely wet and wet years.	Constrained 7 weeks in extremely wet , wet and normal years.	Constrained 8 weeks in extremely wet , wet , normal , and dry years.	No constraint	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.		
			Constrained 6 weeks in normal and dry years.	Constrained 1 week in dry years.	Constrained 10 weeks in critically dry years.				
			Constrained 5 weeks in critically dry years.	Not constrained during critically dry years.					
White water (i.e., kayaking and rafting)	300-8,000	No constraint	No constraint	Constrained 1 week in extremely wet years.	Constrained 4 weeks in extremely wet years.	No constraint	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.		
			No constraint	Not constrained in wet , normal , dry , and critically dry years.	Constrained 7 weeks in wet years.				
			No constraint	Constrained 9 weeks in normal years.	Constrained 10 weeks in dry years.				
Recreational mining	350-600	Constrained 3 weeks in all water-year classes.	Constrained 10 weeks in extremely wet years.	Constrained 8 weeks in extremely wet , wet , and normal years.	Constrained 13 weeks in extremely wet , wet , dry , and critically dry years.	Constrained 3 weeks in all water-year classes.	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.		
			Constrained 15 weeks (entire recreation season) in wet , normal , dry , and critically dry years.	Constrained 3 weeks in dry and critically dry years.	Constrained 14 weeks in normal years.				
			Constrained 9 weeks in extremely wet years.	Constrained 7 weeks in extremely wet , wet , and normal years.					
Swimming/inner-tubing	150-800	Constrained 2 weeks in all water-year classes.	Constrained 11 weeks in wet years.	Constrained 3 weeks in dry and critically dry years.	Constrained 9 weeks in extremely wet years and dry years.	Constrained 2 weeks in all water-year classes.	No constraint		
			Constrained 8 weeks in normal and dry years.	Constrained 10 weeks in wet , normal and critically dry years.					
			Constrained 15 weeks (entire recreation season) in critically dry years.						

TABLE D-3
Riverine Recreation Opportunities – Trinity River

Resource Concern	Preferred Flow Range (cfs)	No Action/Existing Conditions	Recreation Opportunity Constraints During the Primary Recreation Season ^{a,b}					State Permit
			Maximum Flow	Flow Evaluation	Percent Inflow	Mechanical Restoration		
Shore fishing	300-800	Constrained 2 weeks in all water-year classes.	Constrained 9 weeks in extremely wet years.	Constrained 7 weeks in extremely wet, wet, and normal years.	Constrained 12 weeks in all water-year classes.	Constrained 2 weeks in all water-year classes.	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.	
			Constrained 11 weeks in wet years.	Constrained 3 weeks in dry and critically dry years.				
			Constrained 8 weeks in normal and dry years.					
			Constrained 15 weeks in critically dry years.					
Wading	300-800	Constrained 2 weeks in all water-year classes.	Constrained 9 weeks in extremely wet years.	Constrained 7 weeks in extremely wet, wet, and normal years.	Constrained 12 weeks in all water-year classes.	Constrained 2 weeks in all water-year classes.	Constrained 15 weeks (the entire primary recreation season) in all water-year classes.	
			Constrained 11 weeks in wet years.	Constrained 3 weeks in dry and critically dry years.				
			Constrained 8 weeks in normal and dry years.					
			Constrained 15 weeks in critically dry years.					

^aSee Recreation Resources Technical Appendix D for more specific information about weekly flows impacts to recreation opportunities.

^bThe primary recreation season is defined as Memorial Day to Labor Day (approximately the last week in May to the end of the first week in September).

cFlows within preferred range during the entire primary recreation season for all year classes.

TABLE D-4
Impacts to Riverine Recreation Use and Benefits – Dry Water Conditions

	No Action	Compared to No Action										Existing Conditions ^a	
		Maximum Flow		Flow Evaluation		Percent Inflow		Mechanical Restoration		State Permit			
Resource Concern	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Amount	Preferred Alternative Percent Change from Existing Conditions
Trinity River													
Boating													
Recreation Benefits ^b (million \$)	5.4	7.6	41	6.8	27	5.1	-4	5.4	0	1.2	-78	3.7	87
Visitor Days	149,208	210,783	41	190,028	27	143,674	-4	149,208	0	33,208	-78	101,823	87
Fishing													
Recreation Benefits (million \$)	2.8	3.6	30	3.5	25	3.0	8	3.0	5	2.7	-4	1.9	83
Visitor Days	42,894	55,578	30	53,503	25	46,123	8	44,970	5	41,049	-4	29,272	83
Swimming													
Recreation Benefits (million \$)	3.8	4.7	25	4.4	17	3.7	-2	3.8	0	3.1	-17	2.6	71
Visitor Days	144,284	181,034	25	168,580	17	141,598	-2	144,284	0	120,381	-17	98,386	71
Off-river Activities													
Recreation Benefits (million \$)	2.6	3.4	33	3.0	21	2.5	-3	2.6	0	2	-24	1.7	77
Visitor Days	77,487	103,316	33	93,399	21	75,181	-3	77,487	0	59,268	-24	52,879	77
<i>Total Trinity River Recreation Benefits (million \$)</i>	<i>14.5</i>	<i>19.3</i>	<i>33</i>	<i>17.8</i>	<i>23</i>	<i>14.3</i>	<i>-1</i>	<i>14.6</i>	<i>1</i>	<i>8.9</i>	<i>-38</i>	<i>9.9</i>	<i>80</i>
<i>Total Trinity River Visitor Days</i>	<i>413,873</i>	<i>550,711</i>	<i>33</i>	<i>505,510</i>	<i>22</i>	<i>406,576</i>	<i>-2</i>	<i>415,949</i>	<i>0</i>	<i>253,906</i>	<i>-39</i>	<i>282,300</i>	<i>79</i>
Lower Klamath River^c													
Recreation Benefits (\$)	858,000	1.1 million	28	1.1 million	24	923,000	8	897,000	5	812,500	-5	578,500	84
Visitor Days	13,200	16,900	28	16,400	24	14,200	8	13,800	5	12,500	-5	8,900	84

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TABLE D-4
Impacts to Riverine Recreation Use and Benefits – Dry Water Conditions

Resource Concern	No Action	Compared to No Action										Existing Conditions ^a	
		Maximum Flow		Flow Evaluation		Percent Inflow		Mechanical Restoration		State Permit			
		Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change from Existing Conditions
Trinity River													
Boating													
Recreation Benefits (million \$)	5.2	6.5	25	5.9	12	4.2	-19	5.2	0	896,040	-83	3.6	65
Visitor Days	145,204	180,929	25	163,182	12	117,085	-19	145,204	0	24,890	-83	99,146	65
Fishing													
Recreation Benefits (million \$)	2.8	3.6	30	3.5	25	3.0	8	3.0	5	2.7	-4	1.9	83
Visitor Days	42,869	55,545	30	53,471	25	46,096	8	44,943	5	41,025	-4	29,270	83
Swimming													
Recreation Benefits (million \$)	3.7	4.2	14	4.0	7	3.3	-10	3.7	0	2.9	-21	2.5	57
Visitor Days	142,899	163,413	14	153,041	7	128,285	-10	142,899	0	112,476	-21	97,573	57
Off-river Activities													
Recreation Benefits (million \$)	2.5	3.0	19	2.7	10	2.1	-16	2.5	0	1.8	-30	1.7	61
Visitor Days	75,827	90,580	19	83,203	10	64,072	-16	75,827	0	53,242	-30	51,775	61
<i>Total Trinity River Recreation Benefits (million \$)</i>	<i>14.2</i>	<i>17.4</i>	<i>22</i>	<i>16.1</i>	<i>13</i>	<i>12.7</i>	<i>-11</i>	<i>14.4</i>	<i>1</i>	<i>8.2</i>	<i>-42</i>	<i>9.7</i>	<i>65</i>
<i>Total Trinity River Visitor Days</i>	<i>406,799</i>	<i>490,467</i>	<i>21</i>	<i>452,897</i>	<i>11</i>	<i>355,538</i>	<i>-13</i>	<i>408,873</i>	<i>0</i>	<i>231,633</i>	<i>-43</i>	<i>277,764</i>	<i>63</i>

^a1995 existing conditions.

^b Benefits are estimated based on the following per-day values, as derived from each activity presented in Walsh, 1992. Boating: \$36/day; Fishing: \$65/day; Swimming: \$26/day; Off-river: \$33/day, and are expressed in 1997 dollars.

Drift-raft Fishing: The preferred flow range for drift-raft fishing on the Trinity River is 200-1,500 cfs. Similar to drift-boat fishing, drift-raft fishing is constrained by high flows for the first 8 weeks of the primary recreation season in extremely wet and wet water years. In normal and dry water years, drift-raft fishing is constrained the first six weeks of the primary recreation season. In critically dry water years, drift-raft fishing is constrained the first 5 weeks of the recreation season.

White-water activities: The preferred flow range for white-water activities, including kayaking and rafting is 300-8,000 cfs. Under the Maximum Flow alternative, white water flows are not constrained during any week of the primary recreation season. All flows on the Trinity River are greater than 300 cfs, and less than 8,000 cfs during this period for this alternative.

Recreational Mining: The preferred flow range for recreational mining is 350-600 cfs. Under the Maximum Flow alternative, recreational mining is significantly impacted during a portion of the primary recreation season by flows higher than 600 cfs. In extremely wet water years, recreational mining is constrained the first 10 weeks of the season. In wet, normal, dry and critically dry water years, recreational mining is constrained by high flows the entire season (i.e. flows are above 600 cfs during the entire primary recreation season for this alternative).

Swimming/Inner-tubing: The preferred flow range for recreational mining is 150-800 cfs. Under the Maximum Flow alternative, swimming/inner-tubing is constrained by flows higher than 800 cfs during all water-year types. In extremely wet water years, swimming/inner-tubing is constrained the first 9 weeks of the primary recreation season. In wet water years, swimming/inner-tubing is constrained the first 11 weeks of the season. In normal and dry water years, swimming/inner-tubing is constrained for the first 8 weeks of the season. In critically dry water years, this activity is constrained for the entire 15-week primary recreation season.

Shore Fishing/Wading: The preferred flow range for shore fishing and wading is 300-800 cfs. Similar to swimming and inner-tubing, shore fishing and wading is constrained under the Maximum Flow alternative because flows are above 800 cfs for multiple weeks during the primary recreation season. In extremely wet water years, shore fishing and wading are constrained the first 9 weeks of the season. In wet water years, shore fishing and wading are constrained the first 11 weeks of the season. In normal and dry water years, shore fishing and wading are constrained for the first 8 weeks of the season. In critically dry water years, these activities are constrained for the entire 15-week primary recreation season.

Recreation Use and User Benefits. Recreation use and benefits of the Trinity River under the Maximum Flow Alternative are shown, by activity, in Table D-4. As shown, recreation-related use and benefits are estimated to increase by 34 percent in average water years and by 22 percent in dry water years compared to the No Action Alternative.

Recreation-related impacts that would occur from constructing the mechanical restoration projects would result in short-term increases in turbidity during the recreation season (projects would occur July 15 through September 15). Such impacts would be significant to those recreationists who would be participating in activities either within or adjacent to the resultant turbid plume.

Because use and benefits in all water years would increase under this alternative relative to the No Action Alternative, this effect is considered beneficial, generating impacts of an additional 137,000 trips and \$4.8 million in benefits in an average year.

Lower Klamath River Basin/Coastal Area. Opportunities to sportfish for salmon and steelhead along the lower Klamath River are expected to substantially increase under the Maximum Flow Alternative. Sportfishing use and benefits are estimated to increase by 28 percent compared to levels under the No Action Alternative (Table D-4).

1.1.2.5 Flow Evaluation Alternative

Trinity River Basin. Under the Flow Evaluation Alternative, canoeing, drift-boat fishing, drift-raft fishing, recreational mining, swimming, inner-tubing, shore fishing and wading are significantly impacted during a portion of the primary recreation season because flows are higher than the preferred threshold range for these activities. Recreation activities are typically impacted more during extremely wet, wet, normal or dry water years; and less impacted during the critically dry water-year class. Campground use is not constrained at any time during the primary recreation season at Poker Bar, Steiner Flat and North Fork campgrounds. However, use of Steel Bridge and Douglas City campgrounds is constrained during the last week in May in the extremely wet water-year class. In addition, white-water kayaking and rafting are constrained during this same week at the end of May during the extremely wet water-year class when Trinity River flows exceed the upper preferred threshold of 8,000 cfs for white-water activities (Table D-3). The specific weeks and water-year classes in which recreation activities are constrained are outlined below.

Canoeing: The preferred flow range for canoeing on the Trinity River is 200-1,500 cfs. Under the Flow Evaluation Alternative, canoeing is constrained for the first seven weeks of the primary recreation season by flows higher than 1,500 cfs in extremely wet, wet and normal water years. In dry water years, canoeing is minimally constrained during the first week of the recreation season (however, flows of 1,503 cfs during this week make this an almost insignificant constraint). During critically dry water years, all flows in the Trinity River are between 200-1,500 cfs, and canoeing is not constrained at any time.

Campground Use: The preferred flow ranges for campgrounds along the Trinity River are 12,000-8,000 cfs or less. Under the Flow Evaluation Alternative, campground use is not constrained at Poker Bar, Steiner Flat or North Fork campgrounds. However, campgrounds at Steel Bridge and Steiner Bridge are minimally impacted the first week of the recreation season when weekly flows in the Trinity River surpass 8,000 cfs during extremely wet water years. Steel Bridge and Steiner Bridge campgrounds are fully operational during all other water-year classes (wet, normal, dry and critically dry water years).

Drift-boat Fishing: The preferred flow range for drift-boat fishing on the Trinity River is 300-1,500 cfs. Under the Flow Evaluation Alternative, drift-boat fishing is constrained by high flows for the first seven weeks of the primary recreation season for extremely wet, wet and normal water-year classes. Drift-boat fishing is minimally constrained the last week in May under dry water years when flows minimally surpass the 1,500 cfs preferred threshold for this activity (again, flows of 1,503 cfs during this week make this an almost insignificant constraint). Drift-boat fishing is not constrained during the recreation season in critically dry

water years because all flows in the Trinity River are less than 1,500 cfs for this water-year class.

Drift-raft Fishing: The preferred flow range for drift-raft fishing on the Trinity River is 200-1,500 cfs. Drift-raft fishing is constrained during the same weeks and water-year classes as drift-boat fishing (see above).

White-water activities: The preferred flow range for white-water activities, including kayaking and rafting is 300-8,000 cfs. Under the Flow Evaluation Alternative, white-water kayaking and rafting are constrained for only one week during the extremely wet water-year class. During this week, flows exceed the 8,000 cfs upper preferred threshold for this activity.

Recreational Mining: The preferred flow range for recreational mining is 350-600 cfs. Recreational mining is constrained during the primary recreation season under the Flow Evaluation Alternative due to Trinity River flows above the 600 cfs upper preferred threshold range for this activity. Recreational mining is constrained the first 8 weeks of the season in extremely wet, wet and normal water years. In dry and critically dry water years, recreational mining is constrained the first 3 weeks of the recreation season.

Swimming/Inner-tubing: The preferred flow range for recreational mining is 150-800 cfs. Under the Flow Evaluation Alternative, swimming/inner-tubing are constrained by flows higher than 800 cfs during a portion of the recreation season. Swimming/inner-tubing is constrained the first 7 weeks of the recreation season in extremely wet, wet and normal water years. Swimming/inner-tubing is constrained 3 weeks during dry and critically dry water years.

Shore Fishing/Wading: The preferred flow range for shore fishing and wading is 300-800 cfs. Shore fishing and wading are constrained during the same weeks and water-year classes as swimming/inner-tubing (see above).

Recreation Use and User Benefits. Recreation use and benefits of the Trinity River under the Flow Evaluation Alternative are shown, by activity, in Table D-4. As shown in Table D-4, recreation-related use and benefits are estimated to increase by 23 percent in average water years, and by 13 percent in dry water years compared to the No Action Alternative.

Because use and benefits in all water years would increase under this alternative relative to the No Action Alternative, this effect is considered beneficial, generating impacts of an additional 91,600 trips and \$3.3 million in benefits.

Lower Klamath River Basin/Coastal Area. Opportunities to sportfish for salmon and steelhead along the lower Klamath River are expected to substantially increase under this alternative. Annual sportfishing use and benefits are estimated to increase by 3,200 days and \$208,000, or 24 percent compared to No Action levels (Table D-4).

1.1.2.6 Percent Inflow Alternative

Trinity River Basin. Under the Percent Inflow alternative, canoeing, drift-boat fishing, drift-raft fishing, recreational mining, swimming, inner-tubing, shore fishing, wading and white-water kayaking and rafting are all significantly constrained for multiple weeks during the primary recreation season under all water-year classes. Recreation activities are typically constrained by high flows during the early weeks of the primary recreation season, and by low flows at the end of the season. However, campground use is not precluded at any time under any water-year class (Table D-3). The specific weeks and water-year classes in which recreation activities are constrained are outlined below.

Canoeing: The preferred flow range for canoeing on the Trinity River is 200-1,500 cfs. Under the Percent Inflow alternative, canoeing is constrained for a portion of the recreation season in all water-year classes. In extremely wet water years, canoeing is constrained a total of 8 weeks of the recreation season. The first 5 weeks of the season are constrained because flows are greater than the 1,500 cfs preferred threshold. The last three weeks of the season are constrained due to flows below the 200 cfs minimum preferred threshold. In wet water years, canoeing is constrained the first 2 weeks of the season due to high flows, and the last 6 weeks of the season due to low flows. In normal and dry water years, canoeing is constrained the last 8 weeks of the recreation season (approximately mid-July to the first week in September) due to flows less than 200 cfs. In critically dry water years, canoeing is constrained 10 weeks due to flows below the 200 cfs threshold.

Campground Use: The preferred flow ranges for campgrounds along the Trinity River are 12,000-8,000 cfs or less. No campground use is precluded during any water-year classes under the Percent Inflow alternative.

Drift-boat Fishing: The preferred flow range for drift-boat fishing on the Trinity River is 300-1,500 cfs. Under the Percent Inflow alternative, drift-boat fishing is constrained for a portion of the recreation season in each water-year class. In extremely wet water years, drift-boat fishing is constrained the first 5 weeks of the recreation season due to flows above the 1,500 cfs threshold, and constrained the last 4 weeks of the season due to flows below the 300 cfs threshold. In wet water years, drift-boat fishing is constrained a total of 9 weeks (the first 2 weeks of the season and the last 7 weeks of the season) due to Trinity River flows less than 300 cfs. Drift-boat fishing is constrained the last 9 weeks of the recreation season in normal water years, 10 weeks in dry water years, and 12 weeks in critically dry water years because flows are less than 300 cfs.

Drift-raft Fishing: The preferred flow range for drift-raft fishing on the Trinity River is 200-1,500 cfs. Similar to drift-boat fishing, drift-raft fishing is constrained for a portion of the recreation season in each water-year class. In extremely wet water years, drift-raft fishing is constrained a total of 8 weeks during the primary recreation season (the first 5 weeks of the recreation season due to flows above 1,500 cfs and the last 3 weeks of the season due to flows below 200 cfs). In wet water years, drift-raft fishing is also constrained a total of 8 weeks (the first 2 weeks of the season, and the last 6 weeks of the season). In normal and dry water years, drift-raft fishing is constrained the last 8 weeks of the recreation season due to flows less than 200 cfs. In critically dry water years, drift-raft fishing is constrained the last 10 weeks of the season due to low flows.

White-water activities: The preferred flow range for white-water activities, including kayaking and rafting is 300-8,000 cfs. Under the Percent Flow alternative, white-water kayaking and rafting are constrained for several weeks in each water-year class due to flows less than the 300 cfs threshold. In extremely wet water years, white water is constrained the last 4 weeks of the recreation season by low flows. In wet water years, white-water kayaking is constrained the last 7 weeks of the recreation season due to low flows. In normal water years, white-water kayaking and rafting is constrained the last 9 weeks of the season due to low flows. In dry water years, white water is constrained the last 10 weeks of the season, and the last 12 weeks in extremely dry water years.

Recreational Mining: The preferred flow range for recreational mining is 350-600 cfs. Under the Percent Inflow alternative, recreational mining is constrained during a majority of the recreation season because flows are outside the preferred range for this activity. In extremely wet water years, recreational mining is constrained a total of 13 weeks during the recreation season. During the first 8 weeks of the season, flows are above the upper threshold of 600 cfs for this activity, and below the lower threshold of 300 cfs at the end of the season. In wet, dry and critically dry water-year classes, recreational mining is constrained a total of 13 weeks as well. During normal water years, recreational mining is constrained a total of 14 weeks during the recreation season.

Swimming/Inner-tubing: The preferred flow range for recreational mining is 150-800 cfs. Again, similar to other recreational activities, swimming/inner-tubing on the Trinity River is constrained for several weeks during the primary recreation season due to flows outside the preferred threshold range. In extremely wet water years, swimming/inner-tubing is constrained 9 weeks of the recreation season. During the first 8 weeks of the recreation season, flows are above the 800 cfs preferred threshold range and are below the 150 cfs threshold for the last week of the recreation season. In wet and normal water years, swimming/inner-tubing is constrained a total of 10 weeks. A portion of these weeks occur early in the recreation season when flows are above 800 cfs, and another portion of these weeks falls at the end of the recreation season when flows are below the 150 cfs threshold. Swimming/inner-tubing is constrained a total of 9 weeks in dry water years, and 10 weeks in critically dry water years.

Shore Fishing/Wading: The preferred flow range for shore fishing and wading is 300-800 cfs. Again, similar to swimming/inner-tubing, shore fishing and wading are constrained for several weeks during all water-year classes due to Trinity River flows outside the preferred range. Under each water-year type, flows are constrained for 12 weeks. In each water-year class, shore fishing and wading are constrained during the first portion of these weeks because flows are above the 800 cfs preferred threshold. Later in the recreation season, shore fishing and wading are constrained because flows are less than 300 cfs.

Recreation-related impacts that would occur from constructing the mechanical restoration projects would be the same as discussed above for the Flow Evaluation Alternative. Such impacts would be significant to those recreationists who would be participating in activities either within or adjacent to the resultant turbid plume.

Recreation Use and User Benefits. Recreation use and benefits of the Trinity River under the Percent Inflow Alternative are shown, by activity, in Table D-4. As shown in Table D-4, recreation-related use and benefits are estimated to decrease by 1-2 percent in average water

years and by 11-13 percent in dry water years and to increase by 5 percent in wet water years compared to the No Action Alternative.

Although use and benefits in average water years would decrease relative to the No Action Alternative, this adverse effect is considered less than significant. The reduction in use and benefits in dry water years is considered adverse and significant, generating impacts of a reduction of 51,200 trips and \$1.6 million in benefits.

Lower Klamath River Basin/Coastal Area. Opportunities to sportfish for salmon and steelhead along the lower Klamath River are expected to increase under the Percent Inflow Alternative. Sportfishing use and benefits are estimated to increase by 8 percent compared to No Action levels (Table D-4).

1.1.2.7 Mechanical Restoration Alternative

Trinity River Basin. Flow-related recreation opportunities would generally not be affected by the Mechanical Restoration Alternative compared to No Action levels because the flows are identical. Significant turbidity-related impacts would occur from the construction of the mechanical channel rehabilitation projects included as part of the alternative. The watershed protection work included as part of this alternative could affect recreational opportunities in the Trinity River Basin depending on the location of the work.

Recreation Use and Benefits. Under the Mechanical Restoration Alternative, recreation use on the Trinity River is expected to increase by 2,100 visitor days, or about 1 percent, compared to No Action levels. This increase is the result of increased sportfishing opportunities. Annual recreation benefits are estimated to increase by \$135,000.

This alternative is consistent with Trinity and Humboldt County recreation objectives and State/Federal Wild and Scenic River designations. The alternative would generally not interfere with riverine recreation activities, would maintain the free-flowing condition of the river, and would not adversely affect the value for which the river was designated Wild and Scenic (the anadromous fishery).

Lower Klamath River Basin/Coastal Area. Opportunities to sportfish for salmon and steelhead along the lower Klamath River are expected to increase under the Mechanical Restoration Alternative. Annual sportfishing use and benefits are estimated to increase by 5 percent compared to No Action levels (Table D-4).

1.1.2.8 State Permit Alternative

Trinity River Basin.

Recreation Resources and Opportunities. Preferred threshold flows for drift-boat fishing, drift-raft fishing, shore fishing, canoeing, recreational mining, wading, white-water rafting, and kayaking would not be met under the State Permit Alternative. Flows would be only 150 cfs throughout the entire primary recreation season. This alternative would result in a significant impact to all these recreation activities. Preferred flows for swimming and inner-tubing are 150-800 cfs. Because this alternative would provide flows of 150 cfs, no impact to swimming and inner-tubing would occur. However, because the flows to be provided

would be at the low end of the preferred flow range, the swimming and inner-tubing experience would not be considered optimal. In addition, campground use would not be impacted by this alternative.

Recreation Use and User Benefits. Recreation use and benefits of the Trinity River under the State Permit Alternative are shown, by activity, in Tables REC-1a and 1b. As shown, recreation-related use and benefits are estimated to decrease by 39 percent in average water years and by 42 percent in dry water years compared to the No Action Alternative. This adverse impact on recreation-related use and benefits is considered significant, generating impacts of a reduction of 160,000 trips and \$5.5 million in benefits in an average year.

Lower Klamath River Basin/Coastal Area.

Recreation Resources and Opportunities. Operation associated with the State Permit Alternative would be similar to that for the No Action Alternative. It would result in no effects on river resources in the Lower Klamath River Basin/Coastal Area.

Recreation Use and User Benefits. Because no impacts on recreation resources are expected, no impacts on recreation activities other than sportfishing are expected.

Sportfishing use and benefits of the lower Klamath River under the State Permit Alternative are shown in Table D-4. Sportfishing use and benefits are estimated to decrease by 5 percent compared to the No Action Alternative. Although sportfishing use and benefits would decrease, this adverse impact is considered less than significant, generating impacts of a reduction of 700 trips and \$45,000 in benefits.

1.1.2.9 Existing Conditions versus Preferred Alternative

Trinity River Basin. Because existing conditions and the No Action Alternative are identical in terms of hydrologic conditions (i.e. flows released from Lewiston Reservoir), the implementation of the Preferred Alternative would result in similar impacts to recreation opportunities as described in the Flow Evaluation Alternative (compared to No Action). Because the Preferred Alternative also includes the watershed protection component from the Mechanical Restoration Alternative, recreational opportunities could be affected depending on the location of the work (which would be addressed in site-specific environmental reviews).

Unlike the recreation opportunities analysis, the recreation use and benefits analysis identified a change between existing conditions (i.e., 1995) and the Preferred Alternative in the year 2020. Recreation use and benefits under the Preferred Alternative would increase as a result primarily of population growth in Northern California and its effect on the demand for recreation activities along the Trinity River. Recreation use of the Trinity River would increase by 171,000 visitor days, or about 80 percent compared to 1995 existing conditions (Table D-3). About 60 percent of the increase is due to the effect of population growth on recreation demand; the remaining 40 percent is attributable to implementation of the Preferred Alternative.

Lower Klamath River Basin/Coastal Area. The implementation of the Preferred Alternative would result in no impacts to boating, swimming, and camping opportunities in the Lower Klamath River Basin/Coastal Area compared to 1995 existing conditions. Recreation use and benefits would increase, primarily as a result of population growth and its effect on the demand for recreation opportunities along the lower Klamath River. Recreation use of the lower Klamath River would increase by 7,500 visitor days, or about 85 percent compared to 1995 existing conditions. About 60 percent of the increase is due to the effect of population growth on recreation demand; the remaining 40 percent is attributable to implementation of the Preferred Alternative.

1.1.3 Mitigation

Significant flow-related impacts to recreation opportunities and use for the Maximum Flow, Flow Evaluation, Percent Inflow, and State Permit Alternatives would be unmitigable. For the other significant recreation impacts the following mitigation should be implemented to reduce impacts to less than significant levels:

- Impacts on public safety from river flows that are too high or too low (i.e., outside the preferred range of flows) should be mitigated by implementing the following: (1) posting signs at river access points showing daily flows; (2) offering a toll-free telephone number so recreationists can obtain daily flow information; and (3) posting daily flows on the Internet.
- To minimize impacts on recreation activities from turbidity associated with channel rehabilitation projects the construction areas should be isolated using concrete barriers or other effective methods. Construction activities that increase river turbidity should be conducted late in the day. (See Mitigation in the Water Quality section [3.4].)
- Watershed protection work should be coordinated with all applicable federal, state, and local agencies to avoid recreational areas and periods of high use.

1.2 RESERVOIRS

1.2.1 Affected Environment

This section primarily focuses on Shasta, Trinity, and Folsom Reservoirs because the alternatives would primarily affect recreation opportunities and use at these three sites. Other Central Valley Project/State Water Project (CVP/SWP) reservoirs, such as Lewiston, Whiskeytown, Keswick, Oroville, and San Luis are not discussed in detail because no appreciable recreation impacts are anticipated at these facilities given reservoir elevations are not expected to change substantially. There are no affected reservoirs located in the Lower Klamath River Basin/Coastal Area.

1.2.1.1 Trinity River Basin

Recreation Resources, Opportunities, Use, and User Benefits.

Trinity Reservoir. Trinity Reservoir is a unit of the Whiskeytown-Shasta-Trinity National Recreation Area. The reservoir surface and surrounding lands are administered by the USFS. Trinity Reservoir, when full, has 145 miles of shoreline with a substantial number of coves and bays. The reservoir features 4 marinas, 10 boat launches, 20 campgrounds, and 2 swimming areas.

The main recreational attraction is the water surface; therefore, water-dependent recreation activities including powerboating, sailing, houseboating, swimming, waterskiing, and fishing are popular. Camping and hunting are also popular.

As shown in Table D-5, when the reservoir surface is drawn down about 50 feet from the normal high-water elevation to a water surface elevation of 2,320 feet above mean sea level (msl), marinas are required to relocate their facilities or cease operation. Additional marina relocations may be required when the surface is drawn down a total of 75 feet from the normal high-water elevation to a water surface elevation of 2,295 feet above msl (U.S. Bureau of Reclamation, 1994). The swimming area at Clark Springs on the Stuart Fork Arm ceases operation as the reservoir falls 20 feet to a surface elevation of 2,350 feet above msl.

The availability of camping opportunities around the reservoir are affected by reservoir levels and associated USFS management decisions as reservoir levels change. When the reservoir level falls approximately 100 feet to a surface elevation of 2,270 feet above msl, campground use begins to fall off markedly, resulting in the USFS closing some campgrounds.

Recreation use of Trinity Reservoir was estimated to be 265,800 RVDs in 1991; Shasta Reservoir use was estimated at 2.4 million RVDs in 1992; and Whiskeytown Reservoir use was estimated at 279,000 RVDs in 1992. Based on an average value of \$11 per day (U.S. Bureau of Reclamation, 1997), the recreation benefits are as follows: Trinity Reservoir, \$2.9 million; Shasta Reservoir, \$26.4 million; and Whiskeytown Reservoir, \$3.1 million.

Lewiston Reservoir. Lewiston Reservoir is managed by the USFS. It has about 16 miles of shoreline. The reservoir is on the Trinity River immediately downstream from Trinity Reservoir. It acts as a regulating reservoir for releases from Trinity Reservoir and is generally kept at full capacity (U.S. Bureau of Reclamation, 1994). Recreation facilities include campgrounds, a picnic area, boat ramp, and marina. Camping, fishing, and boating are the primary activities at the reservoir. The low-water temperature makes the reservoir unsuitable for water-contact activities. Recreation use in 1991 totaled 247,000 RVDs (U.S. Bureau of Reclamation, 1996).

TABLE D-5
Trinity Reservoir Elevations at which Facility Operations are Adversely Affected

Facility	Elevation Threshold	Effect
Stuart Fork Boat Ramps	50-foot drop a (2,320 msl)	Cease operation
Fairview Boat Ramp	60-foot drop (2,310 msl)	Cease operation
Major Marinas	60-foot drop (2,310 msl)	Must move facilities
Trinity Center Boat Ramp	75-foot drop (2,295 msl)	Cease operation
Campgrounds	100-foot drop (2,270 msl)	Marked decrease in use
Minersville Ramp	200-foot drop (2,170 msl)	Cease operation

^a "Drop" is identified as drop in reservoir levels below the Trinity Reservoir "glory hole."

1.2.1.2 Central Valley and Lower Klamath Valley/Coastal Areas

Recreation Resources, Opportunities, Use, and User Benefits. Substantial recreation-related use occurs at reservoirs in the Central Valley. Key reservoirs that could be affected by restoration of the Trinity River include Shasta Reservoir, Whiskeytown Reservoir, Oroville Reservoir, Folsom Reservoir, and San Luis Reservoir. (As previously mentioned, Shasta Reservoir and Whiskeytown Reservoir are described in the Trinity River Basin for comparison with Trinity Reservoir.) The combined use of these reservoirs in 1992 was estimated at 3.69 million RVDs (U.S. Bureau of Reclamation, 1997). This level of activity generated an estimated \$40.6 million by recreational users, based on an average per-day value of \$11.

Whiskeytown Reservoir. Although Whiskeytown Reservoir is located in the out-of-basin area, it is part of the TRD and receives inflow directly from Lewiston Reservoir through the Clear Creek Tunnel. The reservoir and surrounding lands are managed by the National Park Service (NPS) and are a unit of the Whiskeytown-Shasta-Trinity National Recreation Area. Whiskeytown Reservoir features 36 miles of shoreline. The reservoir features one marina, three boat ramps, several campgrounds, and day-use facilities. Picnicking, camping, swimming, boating, fishing, and hunting are important recreational activities at the reservoir. Waterskiing and jetskiing are also popular summer activities within the Whiskey Creek arm of Whiskeytown Reservoir. Weekend use is much heavier than weekday use, and holiday weekends can be crowded. Waterskiing and jetskiing use on the Whiskey Creek arm of the reservoir is estimated at 1,521 RVDs annually (U.S. Bureau of Land Management, 1995a). The reservoir is normally maintained at a relatively stable water level, with boat ramps and marinas impacted when reservoir levels drop 10-15 feet.

The majority of annual use occurs between June and August. The reservoir's water surface is not drawn down during the summer; typically, 240,000 acre-feet (af) is maintained from April through September. Annual recreation use between 1983 and 1990 at Whiskeytown Reservoir averaged about 468,000 RVDs. In 1992, recreation use totaled about 279,000 RVDs (U.S. Bureau of Reclamation, 1997b). About 1,521 RVDs of fishing occur within the Whiskey Creek arm of Whiskeytown Reservoir. Hiking and running adjacent to the reservoir is estimated at 42 RVDs annually. Sight-seeing and automobile touring at portions of Whiskeytown Reservoir are estimated at about 417 RVDs annually (U.S. Bureau of Land Management, 1995a).

Shasta Reservoir. Shasta Reservoir has 370 miles of shoreline and is a unit of the Whiskeytown-Shasta-Trinity National Recreation Area. The water surface and surrounding lands are administered by the USFS. The reservoir has a highly developed system of recreation facilities including six public boat ramps and 13 private marinas to accommodate boating. Popular water-dependent recreation activities are power boating, house boating, waterskiing, and fishing. Important water-enhanced activities include camping, hunting, and sight-seeing. The reservoir has no designated swimming areas; however, swimming occurs from boats or near campgrounds. Camping at the reservoir is provided at 22 public campgrounds. Four other campgrounds are accessible only by boat.

Camping becomes less popular as the reservoir level drops because of the increased distance between the campgrounds and the shore. Water surface fluctuations have only minor effects on recreational use at Shasta Reservoir until the water surface level is drawn down 75 feet from the normal high-water elevation to a water surface elevation of 992 feet msl (U.S. Bureau of Reclamation, 1997b). At this elevation, marinas must relocate or cease operation. Additional relocations may be required when the reservoir is drawn down 100 feet from the normal high-water elevation to a water surface elevation of 967 feet msl (U.S. Geological Survey, 1970; 1976).

Annual recreation use at Shasta Reservoir averaged 2.38 million RVDs between 1983 and 1990. During 1992, use totaled about 2.4 million RVDs. Of this total, about 1.3 million RVDs involved water-dependent activities (U.S. Bureau of Reclamation, 1997b). About 75 percent of annual use occurs between Memorial Day and Labor Day (U.S. Bureau of Reclamation, 1988).

Keswick Reservoir. Keswick Reservoir is managed by the BLM and Shasta County. The reservoir is about 9 miles long and has 19 miles of shoreline. It is served by one boat ramp on the west shore of the reservoir above Spring Creek. Fishing, boating, and sight-seeing are the primary reservoir activities, with fishing being most popular. Water-contact activities at Keswick Reservoir are unsafe because of the cold water temperature.

Keswick Reservoir regulates releases from Shasta and Whiskeytown Reservoirs. Keswick Reservoir can fluctuate daily because it regulates releases to the Sacramento River. The primary recreation activities are not sensitive to water-level fluctuations.

In 1992, recreation use at Keswick Reservoir totaled 500 RVDs (U.S. Bureau of Reclamation, 1997b). Hiking and running downstream of Keswick Dam is estimated at 8,613 RVDs annually. Hiking and running on the east side of the Sacramento River between Keswick Dam and Shasta Dam are limited because of the rugged and dry terrain; total hiking

and running are estimated at 83 RVDs annually. Waterfowl hunting also occurs at the Keswick Reservoir. Lands adjacent to Keswick Reservoir have been popular for target shooting for many years (U.S. Bureau of Land Management, 1995a).

Other Major Central Valley Reservoirs. Other key reservoirs within the Central Valley include Folsom Reservoir in the Sacramento area, Oroville Reservoir (a SWP facility) near Oroville, and San Luis Reservoir near Los Banos. Folsom Reservoir contains a warmwater fishery of large and smallmouth bass, sunfish, and catfish, and a coldwater fishery of rainbow trout that is stocked by California Department of Fish and Game (CDFG) on an annual basis. Oroville Reservoir contains a warmwater fishery for largemouth, spotted, and smallmouth bass and catfish; and a coldwater fishery for rainbow and brown trout and chinook salmon. More than 30 fish species are known to occur in San Luis Reservoir, but the principal gamefish has been striped bass. In 1992, about 300,000 RVDs occurred at Folsom Reservoir, about 420,000 at Oroville Reservoir, and about 210,000 at San Luis Reservoir.

1.2.2 Environmental Consequences

1.2.2.1 Methodology

Similar to the approach used to evaluate impacts on riverine resources, separate methodologies were used to assess impacts on recreation opportunities versus use and benefits. The evaluation of impacts to opportunities consisted of a multi-step process. Published sources were used to establish reservoir surface-water elevations (i.e., thresholds) that, if not met, would result in impacts to certain water-dependent and water-enhanced recreation facilities (e.g., boat ramps and campgrounds). Reservoir levels for May to September were analyzed over the 69-year PROSIM simulation period for each alternative. Although the primary recreation season takes place from Memorial Day (the last week of May) to Labor Day (the first week in September), the entire months of May and September were included in the evaluation because partial months of data are not available from PROSIM data. Therefore, five whole months of PROSIM data were analyzed to assess impacts to recreation opportunities at Trinity, Shasta, and Folsom Reservoirs. The number of months in which reservoir levels dropped below the preferred threshold was then determined. A percentage of "Recreation Facility Availability" was developed and compared to the No Action Alternative (see Table D-6). The recreation facilities selected in this analysis are most representative of how all the ramps, campgrounds, and marinas on each reservoir would be affected by each of the alternatives.

Annual recreation use at Trinity and Shasta Reservoirs was estimated using regression equations that were developed based on historical water level and use data. Two types of data were used to estimate the reservoir level/recreation use relationships: predicted hydrology data from PROSIM, as well as 20 years of annual use data (1972-1991). Reservoir water levels at the end of September were used as the key predictor variable in the equations (i.e., reservoir levels in September are a good indicator of levels throughout the recreation season). The number of annual RVDs was then predicted for each alternative using September water elevation data from PROSIM along with 2020 population projections for Northern California.

TABLE D-6
Impacts to Trinity and Shasta Reservoir Recreation Opportunities

Facility and Threshold Elevation (msl)	Projected Recreation Facility Availability During the Recreation Season^a						
	No Action	Maximum Flow	Flow Evaluation	Percent Inflow	Mechanical Restoration	State Permit	Existing Conditions
Facility Availability(percent)							
Trinity Reservoir							
Stuart Fork Ramps (2,320)	42	9	42	41	42	56	46
Fairview Ramp & Major Marina Relocations Required (2,310)	52	18	52	50	52	62	55
Trinity Center Ramp (2,295)	62	35	63	59	62	72	63
Campground Use (2,270)	74	64	79	80	74	84	80
Minersville Ramp (2,170)	99	99	100	100	99	100	100
Shasta Reservoir							
McCloud Arm Ramps (952)	92	89	90	90	92	92	93
Sacramento Arm Ramps (950)	92	89	91	92	92	92	94
Sacramento Arm Marina (937)	93	89	93	94	93	94	95
Pit Arm Ramps (907)	98	93	96	98	98	99	98
Centimudi Ramp (844)	100	97	100	100	100	100	100
Folsom Reservoir							
Last boat ramp out of operation (360)	98	99	98	98	98	98	99
Limited lake surface area (boating constrained at 400)	87	89	83	86	87	89	89
Marina closes (405)	80	82	76	79	80	83	82
Decline in campground/picnicking use (430)	56	56	53	54	56	55	56
Beach area inundated (450)	31	32	30	30	31	31	32

^aThe primary recreation season is defined as approximately Memorial Day to Labor Day.

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Use levels at Trinity Reservoir were estimated by a use-estimating (regression) equation that was developed using historical water level and use data:

$$\text{LN(Use)} = -90.01 + 1.48\text{LN(NORCALPOP)} + 0.58\text{DUMB1} + 10.62\text{LN(SEPT)}$$

Where: NORCALPOP represents Northern California population
LN(SEPT) represents the natural logarithm of September reservoir level
DUMB1 represents a dummy variable to account for suspect data
LN(Use) represents the natural logarithm of recreational reservoir visitor days

Similar to Trinity Reservoir, use levels at Shasta Reservoir were estimated by a use-estimating (regression) equation that was developed using historical water level and use data:

$$\text{LN(Use)} = -41.45 + 1.43\text{LN(NORCALPOP)} + 5.22\text{LN(SEPT)}$$

Where: NORCALPOP represents Northern California population
LN(SEPT) represents the natural logarithm of September reservoir level
LN(Use) represents the natural logarithm of recreational reservoir visitor days

The estimated coefficients in these equations are significant at the 99 percent confidence level based on t-values.

The predicted number of annual RVDs was estimated based on September reservoir-level data from PROSIM for each alternative and using 2020 population projections for Northern California.

The benefits of these RVDs were estimated using an average value of \$10.90 per visitor day as developed by Loomis (1995) in a study of recreation benefits at Lake Isabella.

Recreation benefits were estimated using an average value of \$10.90 per visitor day as derived from a study of reservoir users at Lake Isabella (Loomis, 1995). All values were indexed to 1997 dollars.

The effect of the project alternatives on water surface elevations at Lewiston, Keswick, Whiskeytown, Oroville, and San Luis Reservoirs were also evaluated. It was determined that none of the project alternatives would result in significant changes to water surface elevations, and hence recreation opportunities, use, and benefits as compared to the No Action Alternative. Therefore, impacts to these reservoirs are not discussed.

1.2.2.2 Significance Criteria

Impacts to water-dependent and water-enhanced recreation activities at Trinity and Shasta Reservoirs were considered significant if there was:

- A 10 percent or greater change in the frequency of recreation facility availability as compared to No Action levels. (This criteria was based on the assumed margin of error in the analytical tools used in the assessment, and because it suggests a fairly substantial reduction in recreation opportunities.)

- A 10 percent or greater reduction in recreation use compared to No Action levels. (This criteria was based on the assumed margin of error in the analytical tools used in the assessment, and because it suggests a fairly substantial reduction in recreation quality.)

1.2.2.3 No Action Alternative

Trinity River Basin. Under the No Action Alternative, use of certain boating facilities, such as the Stuart Fork boat ramps, Fairview ramp, and major marinas would continue to be moderately constrained during the recreation season (Table D-6). Recreation use of Trinity Reservoir is expected to be about 796,000 visitor days in 2020. Annual recreation benefits are estimated to be \$8.7 million (Table D-7).

Central Valley. Under the No Action Alternative, Shasta Reservoir levels would remain similar to existing conditions because the timing and volume of TRD exports would be similar to existing levels. Use of certain boating facilities, such as the McCloud Arm Ramps, the Sacramento Arm Ramps, and the Sacramento Arm Marina would continue to be moderately constrained during the recreation season. Recreation use of Shasta Reservoir is expected to be about 5.7 million visitor days in 2020, generating about \$61.9 million in recreation benefits.

Impacts to recreation opportunities on Folsom Reservoir follow the same pattern as Shasta Reservoir. Reservoir levels would remain similar to existing conditions because the timing and volume of TRD exports would be similar to existing levels. Use of some recreation facilities, including beach areas, campgrounds and picnicking areas would continue to be moderately constrained.

1.2.2.4 Maximum Flow Alternative

Trinity River Basin. Under the Maximum Flow Alternative, Trinity Reservoir levels would generally be lower than No Action levels during the recreation season. A number of major recreation facilities would be less available compared to No Action levels (Table D-6). This decrease in facility availability would be a significant impact. Recreation use and benefits of Trinity Reservoir under the Maximum Flow Alternative are estimated to decrease by 4 percent in average water years but would increase by 36 percent in dry water years compared to the No Action Alternative (Table D-7). Although the decreases in use and benefits in average water years are adverse, they are considered less than significant.

Central Valley. Shasta Reservoir water elevations would decline under this alternative compared to No Action levels, but not to a significant degree. Recreation use and benefits of Shasta Reservoir under the Maximum Flow Alternative are estimated to decrease by 8 percent an average and by 31 percent in dry water years compared to the No Action Alternative (Table D-8). The decrease in use and benefits in dry water years is considered significant.

Folsom Reservoir water elevations would decline under this alternative compared to No Action levels. The lake surface area would decrease, and boating would be impacted to a significant degree. Impacts to other recreation opportunities, including the operation of boat ramps, the marina, beaches and campgrounds would not be significant compared to No Action.

TABLE D-7
Impacts to Reservoir Use and Benefits^a

Resource Concern	No Action		Maximum Flow		Flow Evaluation		Percent Inflow		Mechanical Restoration		State Permit		Existing Conditions ^b	
	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Preferred Alternative Percent Change from Existing Conditions
Trinity Reservoir														
Recreation Benefits (million \$)	8.7	8.4	-4	8.7	1	8.8	2	Same as No Action	9.2	6	5.3	66		
Visitor Days	796,200	766,200	-4	802,800	1	809,700	2	Same as No Action	841,000	6	484,900	66		
Shasta Reservoir														
Recreation Benefits (million \$)	61.9	56.9	-8	60.9	-2	61.8	0	Same as No Action	63.1	2	38.0	60		
Visitor Days	5,682,700	5,216,500	-8	5,583,400	-2	5,673,600	0	Same as No Action	5,786,800	2	3,483,100	60		

^a Long-term average water conditions only.

^b 1995 existing conditions.

Notes:

Impacts shown for long-term average water conditions only. See Recreational Technical Appendix D for dry water conditions.

All benefits are expressed in 1997 dollars.

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1.2.2.5 Flow Evaluation Alternative

Trinity River Basin. Trinity Reservoir water surface elevations would not be significantly below threshold levels for any of the major facilities under this alternative. Recreation facility availability would increase slightly compared to No Action levels.

Recreation use and benefits of Trinity Reservoir under the Flow Evaluation Alternative are estimated to increase by 1 percent in average water years and by 9 percent in dry water years compared to the No Action Alternative (Table D-6). These increases in use are considered beneficial.

Central Valley. Shasta Reservoir elevations would drop slightly under this alternative, but these declines would not result in a significant impact to any of the recreation facilities. Annual recreation use of the reservoir is expected to decrease by 99,300 visitor days, or about 2 percent, compared to No Action levels. Recreation benefits would decrease by \$1.1 million.

Recreation use and benefits of Shasta Reservoir under the Flow Evaluation Alternative are estimated to decrease by 2 percent in average water years and by 6 percent in dry water years compared to the No Action Alternative (Table D-8). The decrease in benefits in average and dry water years is adverse but considered less than significant.

Similar to Shasta Reservoir, Folsom Reservoir water elevations would drop slightly under this alternative, but these declines would not result in a significant impact to any of the recreation facilities.

1.2.2.6 Percent Inflow Alternative

Trinity River Basin. Under the Percent Inflow Alternative, Trinity Reservoir levels would drop slightly in summer months compared to No Action levels; resulting in a slight decrease in availability of several of the recreation facilities, including the Stuart Fork Ramp, the Fairview Ramp, and the Trinity Center Ramp. However, no significant decrease in facility availability is anticipated. Recreation use and benefits of Trinity Reservoir under the Percent Inflow Alternative are estimated to increase by 2 percent in average water years and by 13 percent in dry water years compared to the No Action Alternative (Table D-8). This increase in use and benefits is considered beneficial.

Central Valley. Shasta Reservoir elevations would drop slightly, but not to a degree that would impact the availability of recreation facilities. Recreation use and benefits of Shasta Reservoir under the Percent Inflow Alternative are estimated to decrease by 1 percent in average and dry water years compared to the No Action Alternative (Table D-8). This increase in use and benefits is considered beneficial.

Under this alternative, Folsom Reservoir elevations would drop slightly, but not to a degree that would impact the availability of recreation facilities. Recreation use and benefits of Shasta Reservoir under the Percent Inflow Alternative are estimated to decrease by 1 percent in average and dry water years compared to the No Action Alternative (Table D-8). This increase in use and benefits is considered beneficial.

1.2.2.7 Mechanical Restoration Alternative

Impacts to reservoir recreation would be the same as those under the No Action Alternative.

1.2.2.8 State Permit Alternative

Trinity River Basin. Under the State Permit Alternative, Trinity Reservoir levels would be slightly higher during the primary recreation season as compared to the No Action Alternative. The availability of recreation facilities would increase compared to No Action levels. Recreation use and benefits of Trinity Reservoir under the State Permit Alternative are estimated to increase by 6 percent in average water years and by 5 percent in dry water years compared to the No Action Alternative (Table D-8). Because use and benefits in all water years would increase under this alternative relative to the No Action Alternative, this effect is considered beneficial.

Central Valley. Under the State Permit Alternative, Shasta Reservoir elevations would increase slightly, but recreation facilities would be relatively unaffected compared to No Action levels (see Table D-6). Annual recreation use of Shasta Reservoir would increase by 104,100 visitor days, or about 3 percent, compared to No Action levels. Recreation benefits would increase by \$1.1 million annually. Recreation use and benefits of Shasta Reservoir under the State Permit Alternative are estimated to increase by 2 percent in average and dry water years compared to the No Action Alternative (see Table D-8). Because use and benefits in all water years would increase under this alternative relative to the No Action Alternative, this effect is considered beneficial.

Under this alternative, Folsom Reservoir elevations would increase slightly, but recreation facilities would be relatively unaffected compared to No Action levels.

1.2.2.9 Existing Conditions versus Preferred Alternative

The difference between existing conditions (i.e., 1995) and the Preferred Alternative in the year 2020 would be identical to the difference between the Flow Evaluation Alternative and No Action in terms of reservoir opportunities. However, reservoir recreation use and benefits would increase due to the effect of population growth on recreation demand.

Table D-8 summarizes the effects of the project alternatives to recreation opportunities, use, and benefits as compared to No Action.

1.2.3 Mitigation

Implementation of the following mitigation measures would reduce Trinity and Shasta Reservoir water elevation related impacts to less than significant levels:

- All affected boat ramps should be extended a sufficient distance to accommodate the new water elevations.
- Marina owners should be compensated for costs associated with moving their facilities or constructing new facilities as a result of the new water elevations.
- Campground facilities should be modified or funding provided to accommodate the new water elevations.

TABLE D-8
Trinity, Shasta, and Folsom Reservoir Recreation Opportunities, Use and Benefits^a

	Recreation Facility Availability During the Recreation Season													
	Existing Conditions		No Action		Maximum Flow		Flow Evaluation		Percent Inflow		Mechanical Restoration		State Permit	
	Facility Availability (Percentage)	Facility Availability (Percentage)	Facility Availability (Percentage)	Percent Change from No Action	Facility Availability (Percentage)	Percent Change from No Action	Facility Availability (Percentage)	Percent Change from No Action	Facility Availability (Percentage)	Percent Change from No Action	Facility Availability (Percentage)	Percent Change from No Action	Facility Availability (Percentage)	Percent Change from No Action
Trinity Reservoir														
Stuart Fork Ramps (2,320 msl)	46	42	9	-33	42	0	41	-1	42	0	56	14		
Fairview Ramp & major marina relocations (2,310 msl)	55	52	18	-34	52	0	50	-2	52	0	62	10		
Trinity Center Ramp (2,295 msl)	63	62	35	-27	63	1	59	-3	62	0	72	10		
Campground Use (2,270 msl)	80	74	64	-10	79	5	80	6	74	0	84	10		
Minersville Ramp (2,170 msl)	100	99	99	0	100	1	100	1	99	0	100	1		
Shasta Reservoir														
McCloud Arm Ramps (952 msl)	93	92	89	-3	90	-2	90	-2	92	0	92	0		
Sacramento Arm Ramps (950 msl)	94	92	89	-3	91	-1	92	0	92	0	92	0		
Sacramento Arm Marina (937 msl)	95	93	89	-4	93	0	94	1	93	0	94	1		
Pit Arm Ramps (907 msl)	98	98	93	-5	96	-2	98	0	98	0	99	1		
Centimudi Ramp (844 msl)	100	100	97	-3	100	0	100	0	100	0	100	0		
Folsom Reservoir														
Last boat ramp out of operation (360 msl) ^c	99	98	95	-3	98	0	98	0	98	0	98	0		
Limited lake surface area (boating constrained at 400 msl)	89	87	77	-10	83	-4	86	-1	87	0	89	2		
Marina closes (405 msl)	82	80	72	-8	76	-4	79	-1	80	0	83	3		
Decline in campground/picnicking use (430 msl)	56	56	53	-3	53	-3	54	-2	56	0	55	-1		
Beach area inundated (450 msl)	32	31	29	-2	30	-1	30	-1	31	0	31	0		
Oroville Reservoir														
Decline in campground/picnicking use (700 msl)	94	91	92	1	91	0	91	0	91	0	91	0		
Limited boat ramp availability and relocation of marina (710 msl)	92	89	90	1	90	1	90	1	89	0	89	0		
Limited lake surface area/boating constrained (750 msl)	84	79	82	3	80	1	79	0	79	0	81	2		
Beach area closed (819 msl)	63	53	51	2	52	-1	52	0	53	0	54	1		
Decline in beach use (840 msl)	55	45	43	-2	45	0	45	0	45	0	47	2		
San Luis Reservoir														
340 msl - Last boat ramp out of operation	98	99	100	1	98	-1	100	1	99	0	99	0		
360 msl - Limited lake surface/decline in campground use	87	91	92	1	90	-1	91	0	91	0	92	1		
Whiskeytown Reservoir														
1198 msl	100	100	100	0	100	0	100	0	100	0	100	0		
1195 msl	100	100	100	0	100	0	100	0	100	0	100	0		
1190 msl	100	100	100	0	100	0	100	0	100	0	100	0		
Trinity Reservoir Benefits—Average Water-year Conditions														
Recreations Benefits (million \$)	5.3	8.7	8.4	-4	8.8	66	8.8	2	8.7	0	9.2	6		
Visitor Days ^c	484,900	796,200	766,200	-4	802,800	66	809,700	2	796,200	0	841,000	6		
Shasta Reservoir Benefits—Average Water-year Conditions														
Recreations Benefits (million \$)	38.0	61.9	56.9	-8	60.4	60	61.8	0	61.9	0	63.1	2		
Visitor Days ^c	3,483,100	5,682,700	5,216,500	-8	5,583,400	60	5,673,600	0	5,682,700	0	5,786,800	2		

TABLE D-8
Trinity, Shasta, and Folsom Reservoir Recreation Opportunities, Use and Benefits^a

	Existing Conditions	Estimated Annual Recreation Use and Change in Benefits Compared to No Action												
		No Action	Maximum Flow		Flow Evaluation			Percent Inflow		Mechanical Restoration		State Permit		
		Amount	Percent Change from No Action	Amount	Percent Change from No Action	Percent Change from Existing Conditions	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Amount	Percent Change from No Action	Percent Change from No Action	
Trinity Reservoir – Dry water-year conditions														
Recreations Benefits (million \$)		3.8	6.0	8.2	36	6.6	9	75	6.8	13	6.0	0	6.4	5
Visitor Days ^c		346,500	555,300	752,800	36	604,900	9	75	625,000	13	555,300	0	585,000	5
Shasta Reservoir – Dry water-year conditions														
Recreations Benefits (million \$)		28	44.6	30.7	-31	41.9	-6	50	44.3	-1	44.6	0	45.3	2
Visitor Days ^c		2,567,800	4,090,300	2,812,800	-31	3,841,600	-6	50	4,064,200	-1	4,090,300	0	4,159,400	2

^a Estimated annual recreation use and change in benefits were identified for only Trinity and Shasta Reservoirs given they were assumed to be the reservoirs most directly affected by the change in Trinity and Shasta Division operations.

^b Long-term average water conditions.

^c Number of recreation visitor days (RVD).

1.3 RIVERINE

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ATTACHMENT D1
RECREATION TECHNICAL APPENDIX – ATTACHMENT A

RECREATION TECHNICAL APPENDIX – ATTACHMENT A

Non-Use Values of Restoring the Trinity River

Introduction

In addition to the values associated with increased recreation use of the Trinity River, restoring the Trinity River can be expected to generate benefits for non-users of the river. This kind of value, which is typically referred to as non-use or existence value, results from the public knowing that an environmental resource or ecosystem is being improved. These values reflect the public's willingness to pay for improved environmental conditions.

To estimate these values, surveys are conducted of the public's willingness to pay for different levels of resource improvement. Because individuals are typically asked what they would be willing to pay (as opposed to actually be asked to pay), these types of studies, which are generally referred to as contingent valuation studies, generate considerable debate concerning their validity (Arrow et al. 1993). The economic theory underlying these values also is widely questioned.

Trinity River Contingent Valuation Study

A contingent valuation study was conducted by the National Biological Service, in cooperation with Trinity County, to determine the non-use values associated with restoring the Trinity River. During the winter of 1993-1994, surveys were mailed out to about 2,700 randomly selected households in California, Nevada, Oregon, and Washington. The surveys included questions about willingness to pay for different levels of stream flow and fish populations in the Trinity River. Five alternative combinations of stream flow and fish populations were identified and respondents were asked how much they would be willing to pay in increased utility bills for each of the stream flow/fish population combinations. The streamflow was actually described in the survey in terms of the percentage of flow that would be diverted to the Sacramento River.

The results of this survey are summarized below in Table A-1. As shown, annual willingness to pay per household range from about \$7-\$17 for alternative 1 to about \$40-\$58 for alternative 5. The values mostly increase as streamflows and fish populations increase. The range in values for each alternative reflects different methods used to estimate the values.

Application to Trinity River EIR/S

The values estimated from the Trinity River contingent valuation study cannot be directly applied to the EIR/S alternatives for several reasons. First, the alternative combinations of streamflows and fish populations do not correspond to streamflows and fish populations associated with the EIR/S. Although this constraint could be overcome by regression analysis in which streamflows and fish populations are specified as independent variables in the analysis, this approach was not used in the analysis conducted by the NBS (Douglas undated).

Other reasons, however, for not using results of the Trinity River study for valuing the EIR/S alternatives are that the survey descriptions of the streamflow/fish population combinations did not describe flow and fish populations that vary by type of water year and by river reach. Consequently, "mapping" from the survey alternatives to the EIR/S alternatives would be difficult and likely considered invalid. Lastly, the values used to describe the streamflow and fish population conditions in the survey do not cover the entire range of conditions that are predicted for the EIR/S alternatives.

It should be noted, however, that the streamflow and fish population conditions for several of the survey alternatives appear to approximate the conditions predicted for some of the EIR/S alternatives. Alternative 5 from the survey has streamflow and fish population conditions that appear similar to the Flow Evaluation Alternative; the annual WTP for alternative 5 was estimated at \$40-58 per household. Alternative 4 from the survey appears to have conditions similar to the Percent Inflow Alternative; the annual WTP for alternative 4 was estimated at \$37-41 per household.

To estimate the total non-use benefits of restoring the Trinity River, the per-household estimates would need to be multiplied by the number of households that would be willing to pay for the improvement. The survey results reflect the average (mean) WTP of households surveyed in California, Oregon, Nevada, and Washington. By using the total number of households in this region (approximately 13.8 million in 1993), the aggregate (total) non-use benefits would range from about \$96 to \$800 million annually. This range likely overstates the actual amount because it includes Trinity River users. Also, the representatives of the sample used to derive the average values should be evaluated more closely.

Comparison to Other Studies

Some perspective on the reasonableness of the values derived from the Trinity River Household Survey can be drawn from comparing them to other similar studies. One particularly relevant study conducted on the West Coast focused on estimating the public's willingness to pay for salmon and steelhead in the Columbia River Basin (Olsen et al., 1991). Approximately 2,900 households in the Pacific Northwest participated in the study by answering questions about their willingness to pay to double salmon and steelhead runs. Respondents who were not participants in either commercial or sport fisheries were considered as expressing an almost "pure" form of existence value because they were considered as resource non-users. Approximately 54% of resource non-users indicated a willingness to pay to double the size of the fish runs. These non-users indicated a willingness to pay an additional \$26.42 per year (mean value in 1992 dollars) on their power utility bills to double the fish runs.

The existence value associated with enhancing California salmon fisheries has been assessed in two contingent valuation studies. The value associated with restoring runs to the upper San Joaquin River was evaluated by Jones & Stokes Associates (1990). Mean annual willingness to pay for increasing the run sizes of chinook salmon to 15,000 fish annually were approximately \$185 per household for California residents. In a study conducted by Meyer (1987), the mean value associated with increasing chinook salmon runs in the San Francisco Bay-Sacramento/San

Joaquin River system by 10,000 fish annually was estimated at approximately \$40 annually per household.

These studies provide some insight into the values held by the public for improving resource conditions on the Trinity River; however, there is no supportable way to apply the results of these studies to the Trinity River Restoration alternatives.

Table A-1. Estimated Non-Use Benefits from the Trinity River Contingent Valuation Study

	Streamflow/Fish Population Conditions	Annual Willingness to Pay per Household (1994 dollars)
Alternative 1	90% of streamflow diverted 9,000 returning adults	\$7.72 - \$17.01
Alternative 2	80% of streamflow diverted 35,000 returning adults	\$9.30 - \$24.83
Alternative 3	70% of streamflow diverted 75,000 returning adults	\$18.03 - \$31.34
Alternative 4	50% of streamflow diverted 85,000 returning adults	\$37.24 - \$41.75
Alternative 5	30% of streamflow diverted 105,000 returning adults	\$40.70 - \$58.14

ATTACHMENT D2
TRINITY RIVER AVERAGE WEEKLY FLOW DATA

ATTACHMENT D3
RECREATION USE AND ECONOMICS DATA

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Table REC-1a. Estimated Visitor Days and Recreation Benefits of the Trinity River, by Alternative: Average Water-Year Conditions

NEPA Analysis	No Action Alternative		Maximum Flow		Flow Study		Percent Inflow		Mech Restoration		State Permit	
	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits
Boating	149,208	\$5,371,488	210,783	\$7,588,188	190,028	\$6,841,008	143,674	\$5,172,264	149,208	\$5,371,488	33,208	\$1,195,488
Net change a	61,575	\$2,216,700	40,820	\$1,469,520	-5,534	-\$199,224	0	\$0	0%	0%	-116,000	-\$4,176,000
Percent change a	41%	41%	27%	27%	-4%	-4%	0%	0%	-78%	-78%	-78%	-78%
Fishing	42,894	\$2,788,110	55,578	\$3,612,570	53,503	\$3,477,695	46,123	\$2,997,995	44,970	\$2,923,050	41,049	\$2,668,185
Net change a	12,684	\$824,460	10,609	\$689,585	3,229	\$209,885	2,076	\$134,940	-1,845	-\$119,925	-4%	-4%
Percent change a	30%	30%	25%	25%	8%	8%	5%	5%	-4%	-4%	-4%	-4%
Swimming	144,284	\$3,751,384	181,034	\$4,706,884	168,580	\$4,383,080	141,598	\$3,681,548	144,284	\$3,751,384	120,381	\$3,129,906
Net change a	36,750	\$955,500	24,296	\$631,696	-2,686	-\$69,836	0	\$0	-23,903	-\$621,478	-17%	-17%
Percent change a	25%	25%	17%	17%	-2%	-2%	0%	0%	-17%	-17%	-17%	-17%
Off-River	77,487	\$2,557,071	103,316	\$3,409,428	93,399	\$3,082,167	75,181	\$2,480,973	77,487	\$2,557,071	59,268	\$1,955,844
Net change a	25,829	\$852,357	15,912	\$525,096	-2,306	-\$76,098	0	\$0	-18,219	-\$601,227	-24%	-24%
Percent change a	33%	33%	21%	21%	-3%	-3%	0%	0%	-24%	-24%	-24%	-24%
TOTAL	413,873	\$14,468,053	550,711	\$19,317,070	505,510	\$17,783,950	406,576	\$14,332,780	415,949	\$14,602,993	253,906	\$8,949,423
Net change a	136,838	\$4,849,017	91,637	\$3,315,897	-7,297	-\$135,273	2,076	\$134,940	-159,967	-\$5,518,630	-39%	-38%
Percent change a	33%	34%	22%	23%	-2%	-1%	1%	1%	-39%	-38%	-38%	-38%

CEQA Analysis	1995 Existing Conditions		Preferred Alt	
	Visitor Days	Benefits	Visitor Days	Benefits
Boating	101,823	\$3,665,628	190,028	\$6,841,008
Net change b	88,205	\$3,175,380	87%	87%
Percent change b	87%	87%		
Fishing	29,272	\$1,902,680	53,503	\$3,477,695
Net change b	24,231	\$1,575,015	83%	83%
Percent change b	83%	83%		
Swimming	98,386	\$2,558,036	168,580	\$4,383,080
Net change b	70,194	\$1,825,044	71%	71%
Percent change b	71%	71%		
Off-River	52,879	\$1,745,007	93,399	\$3,082,167
Net change b	40,520	\$1,337,160	77%	77%
Percent change b	77%	77%		
TOTAL	282,360	\$9,871,351	505,510	\$17,783,950
Net change b	223,150	\$7,912,599	79%	80%
Percent change b	79%	80%		

Notes

All benefits are expressed in 1997 dollars

Benefits are estimated based on the following per-day values, as derived from the median values for each activity presented in Walsh 1992

Boating \$36 day
 Fishing \$65 day

Table REC-1b. Estimated Visitor Days and Recreation Benefits of the Trinity River, by Alternative: Dry Water-Year Conditions

NEPA Analysis	No Action Alternative Visitor Day Benefits	Maximum Flow Visitor Day Benefits	Flow Study Visitor Day Benefits	Percent Inflow Visitor Day Benefits	Mech Restoration Visitor Day Benefits	State Permit Visitor Days Benefits
Boating	145,204	\$5,227,344	180,929	\$6,513,444	163,182	\$5,874,552
Net change a			35,725	\$1,286,100	17,978	\$647,208
Percent change a			25%	25%	12%	12%
Fishing	42,869	\$2,786,485	55,545	\$3,610,425	53,471	\$3,475,615
Net change a			12,676	\$823,940	10,602	\$689,130
Percent change a			30%	30%	25%	25%
Swimming	142,899	\$3,715,374	163,413	\$4,248,738	153,041	\$3,979,066
Net change a			20,514	\$533,364	10,142	\$263,692
Percent change a			14%	14%	7%	7%
Off-River	75,827	\$2,502,291	90,580	\$2,989,140	83,203	\$2,745,699
Net change a			14,753	\$486,849	7,376	\$243,408
Percent change a			19%	19%	10%	10%
TOTAL	406,799	\$14,231,494	490,467	\$17,361,747	452,897	\$16,074,932
Net change a			83,668	\$3,130,253	46,098	\$1,843,438
Percent change a			21%	22%	11%	13%
					-51,261	-\$1,570,408
					-13%	-11%
					408,873	\$14,366,304
					2,074	\$134,810
					1%	1%
					-43%	-42%
					231,633	\$8,244,027
					-175,166	-\$5,987,467

CEQA Analysis	1995 Existing Conditions		Preferred Alt	
	Visitor Day Benefits		Visitor Day Benefits	
Boating	99,146	\$3,569,256	163,182	\$5,874,552
Net change b			64,036	\$2,305,296
Percent change b			65%	65%
Fishing	29,270	\$1,902,550	53,471	\$3,475,615
Net change b			24,201	\$1,573,065
Percent change b			83%	83%
Swimming	97,573	\$2,536,898	153,041	\$3,979,066
Net change b			55,468	\$1,442,168
Percent change b			57%	57%
Off-River	51,775	\$1,708,575	83,203	\$2,745,699
Net change b			31,428	\$1,037,124
Percent change b			61%	61%
TOTAL	277,764	\$9,717,279	452,897	\$16,074,932
Net change b			175,133	\$6,357,653
Percent change b			63%	65%

Notes

All benefits are expressed in 1997 dollars.

Benefits are estimated based on the following per-day values, as derived from the median values for each activity presented in Walsh 1992

Boating \$36 day

Fishing \$65 day

Swimming \$26 day

C-092725

a. Compared to levels under the 1995 Existing Conditions
Off-river \$33/day

b. Compared to levels under the No Action Alternative

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Table REC-2. Estimated Angler Days and Recreation Benefits for Salmon and Steelhead Fishing along the Lower Klamath River, by Alternative

NEPA Analysis	No Action Alternative		Maximum Flow		Flow Study		Percent Inflow		Mech. Restoration		State Permit	
	Angler Days	Benefits	Angler Days	Benefits	Angler Days	Benefits	Angler Days	Benefits	Angler Days	Benefits	Angler Days	Benefits
Sportfishing for Salmon and Steelhead	13,200	\$858,000	16,900	\$1,098,500	16,400	\$1,066,000	14,200	\$923,000	13,800	\$897,000	12,500	\$812,500
Net change ^a			3,700	\$240,500	3,200	\$208,000	1,000	\$65,000	600	\$39,000	-700	-\$45,500
Percent change ^a			28%	28%	24%	24%	8%	8%	5%	5%	-5%	-5%
CEQA Analysis	1995 Existing Conditions		Preferred Alternative									
	Angler Days	Benefits	Angler Days	Benefits								
Sportfishing for Salmon and Steelhead	8,900	\$578,500	16,400	\$1,066,000								
Net change ^b			7,500	\$487,500								
Percent change ^b			84%	84%								

Notes

All benefits are expressed in 1997 dollars.

Benefits are estimated based on the value of \$65 day, as derived from the median value for fishing for anadromous species presented in Walsh 1992.

- a. Compared to levels under the No Action Alternative
- b. Compared to levels under the 1995 Existing Conditions

Table REC-3. Estimated Visitor Days and Recreation Benefits at Lake Shasta and Trinity Lake, by Alternative (Average and Dry Water Year Conditions)**AVERAGE WATER-YEAR CONDITIONS**

NEPA Analysis	No Action Alternative		Maximum Flow		Flow Study		Percent Inflow		Mech. Restoration		State Permit	
	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits
Lake Shasta	5,682,700	\$61,941,430	5,216,500	\$56,859,850	5,583,400	\$60,859,060	5,673,600	\$61,842,240	5,682,700	\$61,941,430	5,786,800	\$63,076,120
Net change a			-466,200	-\$5,081,580	-99,300	-\$1,082,370	-9,100	-\$99,190	0	\$0	104,100	\$1,134,690
Percent change a			-8%	-8%	-2%	-2%	0%	0%	0%	0%	2%	2%
Trinity Lake	796,200	\$8,678,580	766,200	\$8,351,580	802,800	\$8,750,520	809,700	\$8,825,730	796,200	\$8,678,580	841,000	\$9,166,900
Net change a			-30,000	-\$327,000	6,600	\$71,940	13,500	\$147,150	0	\$0	44,800	\$488,320
Percent change a			-4%	-4%	1%	1%	2%	2%	0%	0%	6%	6%
CEQA Analysis	1995 Existing Conditions		Preferred Alternative									
	Visitor Days	Benefits	Visitor Days	Benefits								
Lake Shasta	3,483,100	\$37,965,790	5,583,400	\$60,859,060								
Net change b			2,100,300	\$22,893,270								
Percent change b			60%	60%								
Trinity Lake	484,900	\$5,285,410	802,800	\$8,750,520								
Net change b			317,900	\$3,465,110								
Percent change b			66%	66%								

DRY WATER-YEAR CONDITIONS

NEPA Analysis	No Action Alternative		Maximum Flow		Flow Study		Percent Inflow		Mech. Restoration		State Permit	
	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits	Visitor Days	Benefits
Lake Shasta	4,090,300	\$44,584,270	2,812,800	\$30,659,520	3,841,600	\$41,873,440	4,064,200	\$44,299,780	4,090,300	\$44,584,270	4,159,400	\$45,337,460
Net change a			-1,277,500	-\$13,924,750	-248,700	-\$2,710,830	-26,100	-\$284,490	0	\$0	69,100	\$763,190
Percent change a			-31%	-31%	-6%	-6%	-1%	-1%	0%	0%	2%	2%
Trinity Lake	555,300	\$6,052,770	752,800	\$8,205,520	604,900	\$6,593,410	625,000	\$6,812,500	555,300	\$6,052,770	585,000	\$6,376,500
Net change a			197,500	\$2,152,750	49,600	\$540,640	69,700	\$759,730	0	\$0	29,700	\$323,730
Percent change a			36%	36%	9%	9%	13%	13%	0%	0%	5%	5%
CEQA Analysis	1995 Existing Conditions		Preferred Alternative									
	Visitor Days	Benefits	Visitor Days	Benefits								
Lake Shasta	2,567,800	\$27,989,020	3,841,600	\$41,873,440								
Net change b			1,273,800	\$13,884,420								
Percent change b			50%	50%								
Trinity Lake	346,500	\$3,776,850	604,900	\$6,593,410								
Net change b			258,400	\$2,816,560								
Percent change b			75%	75%								

Notes

All benefits are expressed in 1997 dollars

Benefits were estimated based on an average value of \$10.90 per recreation visitor day as derived from a study of recreation benefits at Lake Isabella in California Loomis 1995

a Change as compared to levels under the No Action Alternative

b Change as compared to levels under the 1995 Existing Conditions

ATTACHMENT D4

RESERVOIR DATA FOR RECREATION OPPORTUNITIES ANALYSIS

Trinity Reservoir 2320 msl Recreation Activity Threshold

TRINITY RESERVOIR

Trinity Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2334	2318	2309	2304	3	60%
1923	2310	2296	2277	2255	2253	5	100%
1924	2220	2184	2176	2169	2165	5	100%
1925	2277	2270	2257	2253	2251	5	100%
1926	2284	2272	2257	2252	2250	5	100%
1927	2338	2337	2325	2322	2317	1	20%
1928	2351	2336	2320	2302	2286	3	60%
1929	2280	2267	2248	2223	2220	5	100%
1930	2263	2251	2246	2241	2238	5	100%
1931	2230	2198	2184	2176	2173	5	100%
1932	2221	2219	2203	2184	2182	5	100%
1933	2218	2207	2184	2180	2177	5	100%
1934	2225	2189	2182	2175	2172	5	100%
1935	2246	2242	2224	2204	2191	5	100%
1936	2252	2245	2241	2226	2223	5	100%
1937	2259	2259	2247	2232	2229	5	100%
1938	2344	2345	2338	2333	2331	0	0%
1939	2319	2304	2287	2268	2266	5	100%
1940	2340	2325	2311	2293	2285	3	60%
1941	2368	2369	2358	2351	2339	0	0%
1942	2360	2362	2356	2351	2337	0	0%
1943	2352	2349	2338	2333	2325	0	0%
1944	2328	2314	2297	2279	2277	4	80%
1945	2318	2313	2303	2285	2277	5	100%
1946	2337	2324	2311	2293	2289	3	60%
1947	2297	2291	2279	2270	2268	5	100%
1948	2304	2311	2305	2302	2301	5	100%
1949	2332	2326	2316	2301	2299	3	60%
1950	2320	2308	2294	2274	2272	5	100%
1951	2346	2333	2317	2300	2298	3	60%
1952	2365	2365	2358	2351	2339	0	0%
1953	2360	2367	2358	2351	2339	0	0%
1954	2361	2348	2334	2322	2316	1	20%
1955	2328	2320	2304	2289	2288	4	80%
1956	2367	2367	2358	2351	2339	0	0%
1957	2358	2355	2341	2336	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2344	2331	2315	2297	2296	3	60%
1960	2316	2316	2306	2292	2290	5	100%
1961	2325	2325	2313	2299	2298	3	60%
1962	2327	2325	2311	2294	2284	3	60%
1963	2357	2350	2341	2336	2333	0	0%
1964	2321	2312	2295	2280	2278	4	80%
1965	2351	2343	2330	2328	2326	0	0%
1966	2362	2347	2333	2318	2313	2	40%
1967	2361	2364	2358	2351	2339	0	0%
1968	2348	2333	2318	2301	2291	3	60%
1969	2363	2364	2357	2351	2339	0	0%
1970	2332	2319	2311	2292	2281	4	80%
1971	2354	2352	2345	2340	2338	0	0%
1972	2353	2342	2327	2310	2298	2	40%
1973	2356	2344	2330	2322	2319	1	20%
1974	2367	2369	2358	2351	2339	0	0%
1975	2365	2369	2358	2351	2339	0	0%
1976	2322	2305	2287	2268	2266	4	80%
1977	2217	2184	2177	2175	2176	5	100%
1978	2316	2319	2314	2311	2312	5	100%
1979	2333	2323	2306	2288	2282	3	60%
1980	2344	2331	2317	2314	2312	3	60%
1981	2338	2326	2309	2295	2292	3	60%
1982	2361	2357	2351	2346	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2355	2342	2328	2325	2324	0	0%
1985	2331	2315	2297	2280	2278	4	80%
1986	2337	2316	2303	2285	2283	4	80%
1987	2308	2292	2272	2256	2253	5	100%
1988	2279	2263	2239	2217	2212	5	100%
1989	2263	2255	2249	2244	2242	5	100%
1990	2264	2252	2247	2231	2228	5	100%
1991	2225	2219	2214	2197	2190	5	100%

204 58%
Percent Availability During Recreation Season 42%

TRINITY RESERVOIR

**Trinity Elevation (ft)
State Permit Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2353	2352	2342	2334	2324	0	0%
1923	2342	2331	2316	2299	2291	3	60%
1924	2262	2248	2232	2220	2208	5	100%
1925	2317	2311	2302	2285	2277	5	100%
1926	2315	2300	2282	2260	2251	5	100%
1927	2362	2364	2356	2350	2336	0	0%
1928	2360	2349	2335	2320	2304	2	40%
1929	2304	2297	2279	2257	2242	5	100%
1930	2291	2285	2277	2268	2259	5	100%
1931	2266	2253	2229	2200	2184	5	100%
1932	2230	2212	2184	2178	2170	5	100%
1933	2240	2246	2232	2210	2193	5	100%
1934	2248	2236	2216	2184	2172	5	100%
1935	2265	2262	2249	2239	2221	5	100%
1936	2279	2278	2271	2262	2254	5	100%
1937	2293	2299	2287	2276	2260	5	100%
1938	2368	2369	2358	2351	2339	0	0%
1939	2326	2312	2295	2275	2267	4	80%
1940	2351	2342	2328	2312	2303	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2365	2362	2352	2346	2333	0	0%
1944	2329	2319	2304	2286	2274	4	80%
1945	2326	2330	2315	2298	2285	3	60%
1946	2343	2336	2323	2307	2296	2	40%
1947	2309	2298	2281	2259	2251	5	100%
1948	2317	2331	2322	2315	2309	3	60%
1949	2361	2353	2340	2325	2318	1	20%
1950	2346	2337	2323	2306	2300	2	40%
1951	2367	2358	2345	2331	2324	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2368	2369	2358	2351	2339	0	0%
1954	2364	2356	2344	2330	2322	0	0%
1955	2336	2327	2312	2296	2288	3	60%
1956	2368	2369	2358	2351	2339	0	0%
1957	2361	2359	2347	2340	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2345	2336	2321	2305	2297	2	40%
1960	2329	2325	2311	2294	2285	3	60%
1961	2342	2339	2326	2310	2303	2	40%
1962	2340	2334	2320	2304	2294	3	60%
1963	2368	2369	2358	2351	2339	0	0%
1964	2323	2313	2297	2279	2272	4	80%
1965	2364	2357	2348	2342	2336	0	0%
1966	2364	2356	2344	2330	2319	1	20%
1967	2368	2369	2358	2351	2339	0	0%
1968	2346	2336	2321	2305	2294	2	40%
1969	2368	2369	2358	2351	2339	0	0%
1970	2342	2334	2320	2308	2300	3	60%
1971	2368	2369	2358	2351	2339	0	0%
1972	2354	2347	2333	2318	2307	2	40%
1973	2368	2362	2349	2343	2336	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2339	2328	2313	2297	2289	3	60%
1977	2249	2226	2201	2185	2176	5	100%
1978	2340	2349	2343	2337	2332	0	0%
1979	2368	2359	2346	2331	2322	0	0%
1980	2366	2360	2352	2345	2339	0	0%
1981	2353	2341	2327	2310	2302	2	40%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2367	2362	2350	2344	2338	0	0%
1985	2338	2327	2311	2293	2285	3	60%
1986	2355	2347	2334	2318	2313	2	40%
1987	2334	2322	2306	2289	2279	3	60%
1988	2313	2306	2290	2270	2260	5	100%
1989	2324	2312	2302	2285	2277	4	80%
1990	2305	2300	2282	2261	2252	5	100%
1991	2245	2236	2221	2188	2176	5	100%

TRINITY RESERVOIR

**Trinity Elevation (ft)
Percent Inflow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2345	2335	2328	2320	1	20%
1923	2332	2320	2304	2287	2281	4	80%
1924	2251	2248	2240	2229	2220	5	100%
1925	2312	2311	2304	2286	2280	5	100%
1926	2300	2280	2259	2234	2229	5	100%
1927	2333	2340	2329	2322	2314	1	20%
1928	2343	2328	2312	2295	2278	3	60%
1929	2288	2284	2277	2256	2238	5	100%
1930	2284	2279	2271	2263	2255	5	100%
1931	2261	2254	2247	2221	2212	5	100%
1932	2241	2224	2215	2211	2206	5	100%
1933	2242	2249	2244	2232	2220	5	100%
1934	2262	2254	2247	2221	2212	5	100%
1935	2279	2277	2270	2261	2247	5	100%
1936	2277	2277	2270	2262	2254	5	100%
1937	2282	2286	2281	2274	2255	5	100%
1938	2354	2358	2352	2345	2339	0	0%
1939	2304	2288	2268	2245	2240	5	100%
1940	2325	2311	2303	2285	2276	4	80%
1941	2368	2369	2358	2351	2339	0	0%
1942	2363	2369	2358	2351	2339	0	0%
1943	2356	2351	2346	2339	2329	0	0%
1944	2324	2313	2298	2279	2271	4	80%
1945	2312	2314	2307	2290	2277	5	100%
1946	2324	2311	2304	2287	2277	4	80%
1947	2280	2272	2251	2226	2220	5	100%
1948	2282	2296	2293	2288	2283	5	100%
1949	2324	2318	2302	2284	2279	4	80%
1950	2310	2303	2294	2276	2270	5	100%
1951	2351	2338	2322	2307	2302	2	40%
1952	2365	2369	2358	2351	2339	0	0%
1953	2358	2368	2358	2351	2339	0	0%
1954	2357	2344	2330	2316	2310	2	40%
1955	2315	2303	2294	2276	2270	5	100%
1956	2360	2363	2356	2350	2339	0	0%
1957	2345	2345	2332	2325	2321	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2327	2313	2306	2289	2282	4	80%
1960	2294	2299	2293	2285	2280	5	100%
1961	2325	2319	2311	2294	2288	4	80%
1962	2316	2311	2304	2287	2280	5	100%
1963	2359	2355	2349	2342	2337	0	0%
1964	2304	2290	2271	2250	2246	5	100%
1965	2335	2334	2319	2313	2309	3	60%
1966	2347	2335	2321	2306	2297	2	40%
1967	2347	2358	2355	2350	2339	0	0%
1968	2337	2324	2311	2294	2285	3	60%
1969	2358	2366	2358	2351	2339	0	0%
1970	2330	2316	2309	2291	2282	4	80%
1971	2347	2353	2349	2343	2337	0	0%
1972	2348	2337	2323	2307	2297	2	40%
1973	2347	2343	2329	2320	2315	2	40%
1974	2367	2369	2358	2351	2339	0	0%
1975	2357	2369	2358	2351	2339	0	0%
1976	2337	2329	2315	2305	2299	3	60%
1977	2252	2228	2212	2208	2206	5	100%
1978	2325	2331	2325	2317	2315	2	40%
1979	2329	2327	2312	2295	2284	3	60%
1980	2352	2343	2338	2331	2325	0	0%
1981	2346	2332	2317	2300	2291	3	60%
1982	2360	2358	2352	2345	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2352	2345	2333	2327	2322	0	0%
1985	2317	2302	2284	2264	2257	5	100%
1986	2324	2311	2303	2285	2280	4	80%
1987	2296	2279	2258	2233	2227	5	100%
1988	2274	2275	2269	2260	2253	5	100%
1989	2305	2301	2294	2285	2279	5	100%
1990	2294	2290	2283	2262	2252	5	100%
1991	2238	2237	2230	2221	2213	5	100%

208 59%
Percent Availability During Recreation Season 41%

TRINITY RESERVOIR

Trinity Elevation (ft)
Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2330	2329	2324	2321	2318	0	0%
1923	2338	2334	2331	2327	2324	1	20%
1924	2327	2318	2314	2309	2306	0	0%
1925	2337	2334	2328	2325	2324	4	80%
1926	2321	2313	2307	2303	2301	0	0%
1927	2337	2338	2334	2331	2329	4	80%
1928	2323	2318	2312	2309	2307	0	0%
1929	2303	2297	2293	2289	2285	4	80%
1930	2305	2298	2292	2288	2285	5	100%
1931	2288	2280	2275	2270	2266	5	100%
1932	2275	2271	2264	2259	2256	5	100%
1933	2249	2256	2251	2247	2244	5	100%
1934	2278	2269	2263	2257	2254	5	100%
1935	2288	2283	2277	2273	2270	5	100%
1936	2277	2275	2269	2266	2263	5	100%
1937	2260	2264	2260	2256	2253	5	100%
1938	2277	2277	2272	2270	2268	5	100%
1939	2268	2258	2252	2246	2242	5	100%
1940	2301	2294	2286	2282	2280	5	100%
1941	2302	2311	2315	2315	2315	5	100%
1942	2330	2334	2331	2328	2327	5	100%
1943	2324	2320	2315	2312	2310	0	0%
1944	2313	2310	2307	2303	2300	4	80%
1945	2317	2314	2309	2306	2304	5	100%
1946	2310	2304	2299	2295	2293	5	100%
1947	2275	2271	2265	2261	2258	5	100%
1948	2270	2279	2274	2272	2270	5	100%
1949	2267	2264	2257	2254	2251	5	100%
1950	2242	2237	2230	2225	2221	5	100%
1951	2278	2269	2260	2256	2253	5	100%
1952	2286	2289	2287	2284	2282	5	100%
1953	2285	2293	2293	2290	2289	5	100%
1954	2310	2303	2297	2295	2293	5	100%
1955	2275	2271	2265	2261	2259	5	100%
1956	2276	2274	2269	2267	2266	5	100%
1957	2254	2253	2246	2242	2240	5	100%
1958	2293	2299	2298	2298	2297	5	100%
1959	2287	2283	2277	2273	2272	5	100%
1960	2255	2258	2252	2248	2245	5	100%
1961	2250	2256	2250	2246	2244	5	100%
1962	2248	2248	2241	2238	2235	5	100%
1963	2289	2283	2276	2271	2269	5	100%
1964	2251	2245	2238	2234	2232	5	100%
1965	2292	2285	2279	2276	2275	5	100%
1966	2296	2293	2288	2286	2285	5	100%
1967	2299	2307	2304	2301	2300	5	100%
1968	2300	2295	2290	2287	2285	5	100%
1969	2317	2320	2316	2313	2311	5	100%
1970	2311	2305	2298	2294	2292	5	100%
1971	2319	2319	2316	2313	2310	5	100%
1972	2318	2316	2311	2309	2307	5	100%
1973	2317	2312	2306	2302	2301	5	100%
1974	2300	2305	2302	2301	2300	5	100%
1975	2289	2299	2295	2292	2291	5	100%
1976	2274	2266	2260	2257	2254	5	100%
1977	2238	2226	2218	2211	2208	5	100%
1978	2247	2248	2246	2244	2246	5	100%
1979	2239	2232	2225	2219	2216	5	100%
1980	2261	2254	2248	2243	2240	5	100%
1981	2241	2230	2221	2215	2210	5	100%
1982	2240	2230	2224	2221	2219	5	100%
1983	2268	2296	2308	2311	2312	5	100%
1984	2310	2305	2299	2296	2294	5	100%
1985	2290	2283	2277	2273	2270	5	100%
1986	2312	2305	2298	2294	2293	5	100%
1987	2293	2286	2279	2276	2272	5	100%
1988	2289	2287	2282	2278	2274	5	100%
1989	2289	2283	2277	2273	2271	5	100%
1990	2247	2241	2233	2228	2224	5	100%
1991	2185	2173	2160	2152	2146	5	100%

317 91%
Percent Availability During Recreation Season 9%

TRINITY RESERVOIR

Trinity Elevation (ft)
Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2339	2342	2329	2320	2307	2	40%
1923	2328	2317	2300	2279	2268	4	80%
1924	2248	2241	2227	2221	2215	5	100%
1925	2302	2296	2284	2275	2264	5	100%
1926	2296	2290	2280	2268	2255	5	100%
1927	2344	2344	2333	2325	2312	1	20%
1928	2348	2329	2311	2292	2271	3	60%
1929	2278	2272	2262	2235	2220	5	100%
1930	2264	2262	2253	2241	2226	5	100%
1931	2232	2229	2224	2218	2212	5	100%
1932	2244	2238	2226	2221	2215	5	100%
1933	2238	2252	2243	2231	2216	5	100%
1934	2258	2254	2242	2229	2213	5	100%
1935	2271	2268	2260	2249	2233	5	100%
1936	2272	2265	2253	2242	2228	5	100%
1937	2269	2273	2267	2255	2230	5	100%
1938	2347	2343	2335	2327	2319	1	20%
1939	2328	2314	2296	2275	2263	4	80%
1940	2339	2331	2320	2302	2286	3	60%
1941	2368	2369	2358	2351	2339	0	0%
1942	2362	2366	2358	2351	2337	0	0%
1943	2351	2346	2334	2326	2312	1	20%
1944	2326	2325	2313	2296	2283	3	60%
1945	2318	2315	2303	2291	2281	5	100%
1946	2339	2325	2311	2292	2277	3	60%
1947	2294	2293	2283	2272	2260	5	100%
1948	2302	2309	2299	2289	2279	5	100%
1949	2319	2317	2305	2296	2283	5	100%
1950	2309	2308	2292	2270	2259	5	100%
1951	2341	2333	2323	2305	2296	2	40%
1952	2365	2368	2358	2351	2339	0	0%
1953	2356	2362	2358	2351	2339	0	0%
1954	2353	2335	2326	2309	2299	2	40%
1955	2308	2308	2298	2288	2275	5	100%
1956	2365	2360	2353	2345	2338	0	0%
1957	2346	2344	2330	2322	2313	1	20%
1958	2368	2369	2358	2351	2339	0	0%
1959	2342	2327	2311	2292	2279	3	60%
1960	2303	2301	2289	2280	2269	5	100%
1961	2317	2317	2305	2296	2283	5	100%
1962	2319	2320	2311	2293	2282	5	100%
1963	2358	2352	2342	2334	2325	0	0%
1964	2327	2321	2305	2289	2277	3	60%
1965	2352	2341	2329	2322	2314	1	20%
1966	2358	2344	2327	2311	2297	2	40%
1967	2353	2360	2353	2347	2339	0	0%
1968	2344	2331	2312	2293	2283	3	60%
1969	2360	2364	2356	2349	2339	0	0%
1970	2332	2325	2314	2301	2287	3	60%
1971	2354	2356	2349	2341	2333	0	0%
1972	2351	2340	2321	2304	2289	2	40%
1973	2349	2341	2326	2317	2309	2	40%
1974	2365	2365	2358	2351	2339	0	0%
1975	2361	2369	2358	2351	2339	0	0%
1976	2336	2330	2317	2307	2295	3	60%
1977	2272	2251	2226	2221	2217	5	100%
1978	2335	2332	2326	2318	2311	2	40%
1979	2339	2340	2324	2308	2299	2	40%
1980	2350	2340	2331	2322	2314	1	20%
1981	2343	2338	2321	2305	2295	2	40%
1982	2359	2351	2343	2336	2327	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2351	2342	2327	2319	2311	2	40%
1985	2335	2321	2304	2289	2276	3	60%
1986	2340	2333	2317	2301	2289	3	60%
1987	2314	2307	2290	2271	2259	5	100%
1988	2295	2295	2286	2265	2252	5	100%
1989	2299	2288	2274	2263	2252	5	100%
1990	2270	2269	2257	2245	2231	5	100%
1991	2220	2219	2214	2209	2203	5	100%

202

58%

Percent Availability During Recreation Season

42%

TRINITY RESERVOIR

**Trinity Elevation (ft)
Existing Conditions**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Stuart Forks Ramp threshold of 2320 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2346	2334	2328	2323	0	0%
1923	2329	2316	2298	2278	2274	4	80%
1924	2227	2219	2210	2192	2185	5	100%
1925	2300	2301	2290	2285	2280	5	100%
1926	2308	2290	2269	2243	2238	5	100%
1927	2343	2349	2339	2333	2328	0	0%
1928	2358	2345	2330	2312	2303	2	40%
1929	2291	2279	2265	2250	2244	5	100%
1930	2284	2276	2261	2255	2250	5	100%
1931	2241	2226	2216	2190	2183	5	100%
1932	2230	2208	2184	2179	2173	5	100%
1933	2224	2228	2220	2196	2185	5	100%
1934	2238	2221	2210	2185	2179	5	100%
1935	2257	2250	2233	2228	2219	5	100%
1936	2262	2259	2248	2242	2238	5	100%
1937	2275	2276	2264	2258	2252	5	100%
1938	2368	2369	2358	2351	2339	0	0%
1939	2316	2300	2279	2255	2251	5	100%
1940	2325	2317	2306	2286	2282	4	80%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2360	2355	2345	2339	2332	0	0%
1944	2326	2314	2297	2276	2272	4	80%
1945	2311	2314	2304	2285	2278	5	100%
1946	2335	2326	2311	2292	2287	3	60%
1947	2301	2293	2272	2248	2237	5	100%
1948	2289	2304	2294	2290	2287	5	100%
1949	2332	2328	2312	2294	2290	3	60%
1950	2312	2308	2294	2276	2272	5	100%
1951	2357	2347	2332	2317	2314	2	40%
1952	2368	2369	2358	2351	2339	0	0%
1953	2366	2369	2358	2351	2339	0	0%
1954	2359	2350	2336	2320	2318	2	40%
1955	2325	2313	2295	2276	2272	4	80%
1956	2368	2369	2358	2351	2339	0	0%
1957	2355	2354	2343	2338	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2339	2328	2311	2292	2289	3	60%
1960	2317	2313	2302	2285	2277	5	100%
1961	2333	2328	2313	2294	2291	3	60%
1962	2320	2315	2305	2286	2281	5	100%
1963	2368	2369	2358	2351	2339	0	0%
1964	2314	2301	2283	2261	2258	5	100%
1965	2343	2342	2332	2326	2323	0	0%
1966	2359	2348	2335	2319	2312	2	40%
1967	2368	2369	2358	2351	2339	0	0%
1968	2342	2330	2314	2295	2287	3	60%
1969	2368	2369	2358	2351	2339	0	0%
1970	2337	2327	2311	2299	2295	3	60%
1971	2368	2369	2358	2351	2339	0	0%
1972	2352	2342	2327	2310	2301	2	40%
1973	2361	2354	2340	2334	2331	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2333	2319	2302	2283	2280	4	80%
1977	2230	2200	2184	2179	2176	5	100%
1978	2332	2345	2338	2332	2331	0	0%
1979	2356	2345	2330	2320	2317	2	40%
1980	2361	2354	2344	2338	2335	0	0%
1981	2347	2334	2317	2298	2294	3	60%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2362	2355	2344	2339	2336	0	0%
1985	2333	2320	2302	2282	2278	4	80%
1986	2343	2333	2317	2299	2296	3	60%
1987	2318	2302	2283	2260	2255	5	100%
1988	2280	2272	2258	2248	2241	5	100%
1989	2300	2296	2283	2278	2274	5	100%
1990	2291	2281	2267	2255	2249	5	100%
1991	2236	2222	2216	2205	2198	5	100%

190 54%
Percent Availability During Recreation Season 46%

Trinity Reservoir 2310 msl Recreation Activity Threshold

TRINITY RESERVOIR

Trinity Elevation (ft) No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2334	2318	2309	2304	2	40%
1923	2310	2296	2277	2255	2253	5	100%
1924	2220	2184	2176	2169	2165	5	100%
1925	2277	2270	2257	2253	2251	5	100%
1926	2284	2272	2257	2252	2250	5	100%
1927	2338	2337	2325	2322	2317	0	0%
1928	2351	2336	2320	2302	2286	2	40%
1929	2280	2267	2248	2223	2220	5	100%
1930	2263	2251	2246	2241	2238	5	100%
1931	2230	2198	2184	2176	2173	5	100%
1932	2221	2219	2203	2184	2182	5	100%
1933	2218	2207	2184	2180	2177	5	100%
1934	2225	2189	2182	2175	2172	5	100%
1935	2246	2242	2224	2204	2191	5	100%
1936	2252	2245	2241	2226	2223	5	100%
1937	2259	2259	2247	2232	2229	5	100%
1938	2344	2345	2338	2333	2331	0	0%
1939	2319	2304	2287	2268	2266	4	80%
1940	2340	2325	2311	2293	2285	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2360	2362	2356	2351	2337	0	0%
1943	2352	2349	2338	2333	2325	0	0%
1944	2328	2314	2297	2279	2277	3	60%
1945	2318	2313	2303	2285	2277	3	60%
1946	2337	2324	2311	2293	2289	2	40%
1947	2297	2291	2279	2270	2268	5	100%
1948	2304	2311	2305	2302	2301	4	80%
1949	2332	2326	2316	2301	2299	2	40%
1950	2320	2308	2294	2274	2272	4	80%
1951	2346	2333	2317	2300	2298	2	40%
1952	2365	2365	2358	2351	2339	0	0%
1953	2360	2367	2358	2351	2339	0	0%
1954	2361	2348	2334	2322	2316	0	0%
1955	2328	2320	2304	2289	2288	3	60%
1956	2367	2367	2358	2351	2339	0	0%
1957	2358	2355	2341	2336	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2344	2331	2315	2297	2296	2	40%
1960	2316	2316	2306	2292	2290	3	60%
1961	2325	2325	2313	2299	2298	2	40%
1962	2327	2325	2311	2294	2284	2	40%
1963	2357	2350	2341	2336	2333	0	0%
1964	2321	2312	2295	2280	2278	3	60%
1965	2351	2343	2330	2328	2326	0	0%
1966	2362	2347	2333	2318	2313	0	0%
1967	2361	2364	2358	2351	2339	0	0%
1968	2348	2333	2318	2301	2291	2	40%
1969	2363	2364	2357	2351	2339	0	0%
1970	2332	2319	2311	2292	2281	2	40%
1971	2354	2352	2345	2340	2338	0	0%
1972	2353	2342	2327	2310	2298	2	40%
1973	2356	2344	2330	2322	2319	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2365	2369	2358	2351	2339	0	0%
1976	2322	2305	2287	2268	2266	4	80%
1977	2217	2184	2177	2175	2176	5	100%
1978	2316	2319	2314	2311	2312	0	0%
1979	2333	2323	2306	2288	2282	3	60%
1980	2344	2331	2317	2314	2312	0	0%
1981	2338	2326	2309	2295	2292	3	60%
1982	2361	2357	2351	2346	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2355	2342	2328	2325	2324	0	0%
1985	2331	2315	2297	2280	2278	3	60%
1986	2337	2316	2303	2285	2283	3	60%
1987	2308	2292	2272	2256	2253	5	100%
1988	2279	2263	2239	2217	2212	5	100%
1989	2263	2255	2249	2244	2242	5	100%
1990	2264	2252	2247	2231	2228	5	100%
1991	2225	2219	2214	2197	2190	5	100%

167 48%
Percent Availability During Recreation Season 52%

TRINITY RESERVOIR

Trinity Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2353	2352	2342	2334	2324	2	40%
1923	2342	2331	2316	2299	2291	5	100%
1924	2262	2248	2232	2220	2208	5	100%
1925	2317	2311	2302	2285	2277	3	60%
1926	2315	2300	2282	2260	2251	4	80%
1927	2362	2364	2356	2350	2336	0	0%
1928	2360	2349	2335	2320	2304	1	20%
1929	2304	2297	2279	2257	2242	5	100%
1930	2291	2285	2277	2268	2259	5	100%
1931	2266	2253	2229	2200	2184	5	100%
1932	2230	2212	2184	2178	2170	5	100%
1933	2240	2246	2232	2210	2193	5	100%
1934	2248	2236	2216	2184	2172	5	100%
1935	2265	2262	2249	2239	2221	5	100%
1936	2279	2278	2271	2262	2254	5	100%
1937	2293	2299	2287	2276	2260	5	100%
1938	2368	2369	2358	2351	2339	0	0%
1939	2326	2312	2295	2275	2267	3	60%
1940	2351	2342	2328	2312	2303	1	20%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2365	2362	2352	2346	2333	0	0%
1944	2329	2319	2304	2286	2274	3	60%
1945	2326	2330	2315	2298	2285	2	40%
1946	2343	2336	2323	2307	2296	2	40%
1947	2309	2298	2281	2259	2251	5	100%
1948	2317	2331	2322	2315	2309	1	20%
1949	2361	2353	2340	2325	2318	0	0%
1950	2346	2337	2323	2306	2300	2	40%
1951	2367	2358	2345	2331	2324	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2368	2369	2358	2351	2339	0	0%
1954	2364	2356	2344	2330	2322	0	0%
1955	2336	2327	2312	2296	2288	2	40%
1956	2368	2369	2358	2351	2339	0	0%
1957	2361	2359	2347	2340	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2345	2336	2321	2305	2297	2	40%
1960	2329	2325	2311	2294	2285	2	40%
1961	2342	2339	2326	2310	2303	2	40%
1962	2340	2334	2320	2304	2294	2	40%
1963	2368	2369	2358	2351	2339	0	0%
1964	2323	2313	2297	2279	2272	3	60%
1965	2364	2357	2348	2342	2336	0	0%
1966	2364	2356	2344	2330	2319	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2346	2336	2321	2305	2294	2	40%
1969	2368	2369	2358	2351	2339	0	0%
1970	2342	2334	2320	2308	2300	2	40%
1971	2368	2369	2358	2351	2339	0	0%
1972	2354	2347	2333	2318	2307	1	20%
1973	2368	2362	2349	2343	2336	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2339	2328	2313	2297	2289	2	40%
1977	2249	2226	2201	2185	2176	5	100%
1978	2340	2349	2343	2337	2332	0	0%
1979	2368	2359	2346	2331	2322	0	0%
1980	2366	2360	2352	2345	2339	0	0%
1981	2353	2341	2327	2310	2302	2	40%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2367	2362	2350	2344	2338	0	0%
1985	2338	2327	2311	2293	2285	2	40%
1986	2355	2347	2334	2318	2313	0	0%
1987	2334	2322	2306	2289	2279	3	60%
1988	2313	2306	2290	2270	2260	4	80%
1989	2324	2312	2302	2285	2277	3	60%
1990	2305	2300	2282	2261	2252	5	100%
1991	2245	2236	2221	2188	2176	5	100%

133 38%
Percent Availability During Recreation Season 62%

TRINITY RESERVOIR

Trinity Elevation (ft) Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2345	2335	2328	2320	0	0%
1923	2332	2320	2304	2287	2281	3	60%
1924	2251	2248	2240	2229	2220	5	100%
1925	2312	2311	2304	2286	2280	3	60%
1926	2300	2280	2259	2234	2229	5	100%
1927	2333	2340	2329	2322	2314	0	0%
1928	2343	2328	2312	2295	2278	2	40%
1929	2288	2284	2277	2256	2238	5	100%
1930	2284	2279	2271	2263	2255	5	100%
1931	2261	2254	2247	2221	2212	5	100%
1932	2241	2224	2215	2211	2206	5	100%
1933	2242	2249	2244	2232	2220	5	100%
1934	2262	2254	2247	2221	2212	5	100%
1935	2279	2277	2270	2261	2247	5	100%
1936	2277	2277	2270	2262	2254	5	100%
1937	2282	2286	2281	2274	2255	5	100%
1938	2354	2358	2352	2345	2339	0	0%
1939	2304	2288	2268	2245	2240	5	100%
1940	2325	2311	2303	2285	2276	3	60%
1941	2368	2369	2358	2351	2339	0	0%
1942	2363	2369	2358	2351	2339	0	0%
1943	2356	2351	2346	2339	2329	0	0%
1944	2324	2313	2298	2279	2271	3	60%
1945	2312	2314	2307	2290	2277	3	60%
1946	2324	2311	2304	2287	2277	3	60%
1947	2280	2272	2251	2226	2220	5	100%
1948	2282	2296	2293	2288	2283	5	100%
1949	2324	2318	2302	2284	2279	3	60%
1950	2310	2303	2294	2276	2270	5	100%
1951	2351	2338	2322	2307	2302	2	40%
1952	2365	2369	2358	2351	2339	0	0%
1953	2358	2368	2358	2351	2339	0	0%
1954	2357	2344	2330	2316	2310	1	20%
1955	2315	2303	2294	2276	2270	4	80%
1956	2360	2363	2356	2350	2339	0	0%
1957	2345	2345	2332	2325	2321	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2327	2313	2306	2289	2282	3	60%
1960	2294	2299	2293	2285	2280	5	100%
1961	2325	2319	2311	2294	2288	2	40%
1962	2316	2311	2304	2287	2280	3	60%
1963	2359	2355	2349	2342	2337	0	0%
1964	2304	2290	2271	2250	2246	5	100%
1965	2335	2334	2319	2313	2309	1	20%
1966	2347	2335	2321	2306	2297	2	40%
1967	2347	2358	2355	2350	2339	0	0%
1968	2337	2324	2311	2294	2285	2	40%
1969	2358	2366	2358	2351	2339	0	0%
1970	2330	2316	2309	2291	2282	3	60%
1971	2347	2353	2349	2343	2337	0	0%
1972	2348	2337	2323	2307	2297	2	40%
1973	2347	2343	2329	2320	2315	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2357	2369	2358	2351	2339	0	0%
1976	2337	2329	2315	2305	2299	2	40%
1977	2252	2228	2212	2208	2206	5	100%
1978	2325	2331	2325	2317	2315	0	0%
1979	2329	2327	2312	2295	2284	2	40%
1980	2352	2343	2338	2331	2325	0	0%
1981	2346	2332	2317	2300	2291	2	40%
1982	2360	2358	2352	2345	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2352	2345	2333	2327	2322	0	0%
1985	2317	2302	2284	2264	2257	4	80%
1986	2324	2311	2303	2285	2280	3	60%
1987	2296	2279	2258	2233	2227	5	100%
1988	2274	2275	2269	2260	2253	5	100%
1989	2305	2301	2294	2285	2279	5	100%
1990	2294	2290	2283	2262	2252	5	100%
1991	2238	2237	2230	2221	2213	5	100%

TRINITY RESERVOIR

Trinity Elevation (ft)
Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2330	2329	2324	2321	2318	0	0%
1923	2338	2334	2331	2327	2324	0	0%
1924	2327	2318	2314	2309	2306	2	40%
1925	2337	2334	2328	2325	2324	0	0%
1926	2321	2313	2307	2303	2301	3	60%
1927	2337	2338	2334	2331	2329	0	0%
1928	2323	2318	2312	2309	2307	2	40%
1929	2303	2297	2293	2289	2285	5	100%
1930	2305	2298	2292	2288	2285	5	100%
1931	2288	2280	2275	2270	2266	5	100%
1932	2275	2271	2264	2259	2256	5	100%
1933	2249	2256	2251	2247	2244	5	100%
1934	2278	2269	2263	2257	2254	5	100%
1935	2288	2283	2277	2273	2270	5	100%
1936	2277	2275	2269	2266	2263	5	100%
1937	2260	2264	2260	2256	2253	5	100%
1938	2277	2277	2272	2270	2268	5	100%
1939	2268	2258	2252	2246	2242	5	100%
1940	2301	2294	2286	2282	2280	5	100%
1941	2302	2311	2315	2315	2315	1	20%
1942	2330	2334	2331	2328	2327	0	0%
1943	2324	2320	2315	2312	2310	1	20%
1944	2313	2310	2307	2303	2300	4	80%
1945	2317	2314	2309	2306	2304	3	60%
1946	2310	2304	2299	2295	2293	5	100%
1947	2275	2271	2265	2261	2258	5	100%
1948	2270	2279	2274	2272	2270	5	100%
1949	2267	2264	2257	2254	2251	5	100%
1950	2242	2237	2230	2225	2221	5	100%
1951	2278	2269	2260	2256	2253	5	100%
1952	2286	2289	2287	2284	2282	5	100%
1953	2285	2293	2293	2290	2289	5	100%
1954	2310	2303	2297	2295	2293	5	100%
1955	2275	2271	2265	2261	2259	5	100%
1956	2276	2274	2269	2267	2266	5	100%
1957	2254	2253	2246	2242	2240	5	100%
1958	2293	2299	2298	2298	2297	5	100%
1959	2287	2283	2277	2273	2272	5	100%
1960	2255	2258	2252	2248	2245	5	100%
1961	2250	2256	2250	2246	2244	5	100%
1962	2248	2248	2241	2238	2235	5	100%
1963	2289	2283	2276	2271	2269	5	100%
1964	2251	2245	2238	2234	2232	5	100%
1965	2292	2285	2279	2276	2275	5	100%
1966	2296	2293	2288	2286	2285	5	100%
1967	2299	2307	2304	2301	2300	5	100%
1968	2300	2295	2290	2287	2285	5	100%
1969	2317	2320	2316	2313	2311	0	0%
1970	2311	2305	2298	2294	2292	4	80%
1971	2319	2319	2316	2313	2310	1	20%
1972	2318	2316	2311	2309	2307	2	40%
1973	2317	2312	2306	2302	2301	3	60%
1974	2300	2305	2302	2301	2300	5	100%
1975	2289	2299	2295	2292	2291	5	100%
1976	2274	2266	2260	2257	2254	5	100%
1977	2238	2226	2218	2211	2208	5	100%
1978	2247	2248	2246	2244	2246	5	100%
1979	2239	2232	2225	2219	2216	5	100%
1980	2261	2254	2248	2243	2240	5	100%
1981	2241	2230	2221	2215	2210	5	100%
1982	2240	2230	2224	2221	2219	5	100%
1983	2268	2296	2308	2311	2312	3	60%
1984	2310	2305	2299	2296	2294	5	100%
1985	2290	2283	2277	2273	2270	5	100%
1986	2312	2305	2298	2294	2293	4	80%
1987	2293	2286	2279	2276	2272	5	100%
1988	2289	2287	2282	2278	2274	5	100%
1989	2289	2283	2277	2273	2271	5	100%
1990	2247	2241	2233	2228	2224	5	100%
1991	2185	2173	2160	2152	2146	5	100%

288 82%
Percent Availability During Recreation Season 18%

TRINITY RESERVOIR

Trinity Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2339	2342	2329	2320	2307	1	20%
1923	2328	2317	2300	2279	2268	3	60%
1924	2248	2241	2227	2221	2215	5	100%
1925	2302	2296	2284	2275	2264	5	100%
1926	2296	2290	2280	2268	2255	5	100%
1927	2344	2344	2333	2325	2312	0	0%
1928	2348	2329	2311	2292	2271	2	40%
1929	2278	2272	2262	2235	2220	5	100%
1930	2264	2262	2253	2241	2226	5	100%
1931	2232	2229	2224	2218	2212	5	100%
1932	2244	2238	2226	2221	2215	5	100%
1933	2238	2252	2243	2231	2216	5	100%
1934	2258	2254	2242	2229	2213	5	100%
1935	2271	2268	2260	2249	2233	5	100%
1936	2272	2265	2253	2242	2228	5	100%
1937	2269	2273	2267	2255	2230	5	100%
1938	2347	2343	2335	2327	2319	0	0%
1939	2328	2314	2296	2275	2263	3	60%
1940	2339	2331	2320	2302	2286	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2362	2366	2358	2351	2337	0	0%
1943	2351	2346	2334	2326	2312	0	0%
1944	2326	2325	2313	2296	2283	2	40%
1945	2318	2315	2303	2291	2281	3	60%
1946	2339	2325	2311	2292	2277	2	40%
1947	2294	2293	2283	2272	2260	5	100%
1948	2302	2309	2299	2289	2279	5	100%
1949	2319	2317	2305	2296	2283	3	60%
1950	2309	2308	2292	2270	2259	5	100%
1951	2341	2333	2323	2305	2296	2	40%
1952	2365	2368	2358	2351	2339	0	0%
1953	2356	2362	2358	2351	2339	0	0%
1954	2353	2335	2326	2309	2299	2	40%
1955	2308	2308	2298	2288	2275	5	100%
1956	2365	2360	2353	2345	2338	0	0%
1957	2346	2344	2330	2322	2313	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2342	2327	2311	2292	2279	2	40%
1960	2303	2301	2289	2280	2269	5	100%
1961	2317	2317	2305	2296	2283	3	60%
1962	2319	2320	2311	2293	2282	2	40%
1963	2358	2352	2342	2334	2325	0	0%
1964	2327	2321	2305	2289	2277	3	60%
1965	2352	2341	2329	2322	2314	0	0%
1966	2358	2344	2327	2311	2297	1	20%
1967	2353	2360	2353	2347	2339	0	0%
1968	2344	2331	2312	2293	2283	2	40%
1969	2360	2364	2356	2349	2339	0	0%
1970	2332	2325	2314	2301	2287	2	40%
1971	2354	2356	2349	2341	2333	0	0%
1972	2351	2340	2321	2304	2289	2	40%
1973	2349	2341	2326	2317	2309	1	20%
1974	2365	2365	2358	2351	2339	0	0%
1975	2361	2369	2358	2351	2339	0	0%
1976	2336	2330	2317	2307	2295	2	40%
1977	2272	2251	2226	2221	2217	5	100%
1978	2335	2332	2326	2318	2311	0	0%
1979	2339	2340	2324	2308	2299	2	40%
1980	2350	2340	2331	2322	2314	0	0%
1981	2343	2338	2321	2305	2295	2	40%
1982	2359	2351	2343	2336	2327	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2351	2342	2327	2319	2311	0	0%
1985	2335	2321	2304	2289	2276	3	60%
1986	2340	2333	2317	2301	2289	2	40%
1987	2314	2307	2290	2271	2259	4	80%
1988	2295	2295	2286	2265	2252	5	100%
1989	2299	2288	2274	2263	2252	5	100%
1990	2270	2269	2257	2245	2231	5	100%
1991	2220	2219	2214	2209	2203	5	100%

168 48%
Percent Availability During Recreation Season 52%

TRINITY RESERVOIR

Trinity Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Fairview Ramp and Major Marina Relocations threshold of 2310 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2346	2334	2328	2323	0	0%
1923	2329	2316	2298	2278	2274	3	60%
1924	2227	2219	2210	2192	2185	5	100%
1925	2300	2301	2290	2285	2280	5	100%
1926	2308	2290	2269	2243	2238	5	100%
1927	2343	2349	2339	2333	2328	0	0%
1928	2358	2345	2330	2312	2303	1	20%
1929	2291	2279	2265	2250	2244	5	100%
1930	2284	2276	2261	2255	2250	5	100%
1931	2241	2226	2216	2190	2183	5	100%
1932	2230	2208	2184	2179	2173	5	100%
1933	2224	2228	2220	2196	2185	5	100%
1934	2238	2221	2210	2185	2179	5	100%
1935	2257	2250	2233	2228	2219	5	100%
1936	2262	2259	2248	2242	2238	5	100%
1937	2275	2276	2264	2258	2252	5	100%
1938	2368	2369	2358	2351	2339	0	0%
1939	2316	2300	2279	2255	2251	4	80%
1940	2325	2317	2306	2286	2282	3	60%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2360	2355	2345	2339	2332	0	0%
1944	2326	2314	2297	2276	2272	3	60%
1945	2311	2314	2304	2285	2278	3	60%
1946	2335	2326	2311	2292	2287	2	40%
1947	2301	2293	2272	2248	2237	5	100%
1948	2289	2304	2294	2290	2287	5	100%
1949	2332	2328	2312	2294	2290	2	40%
1950	2312	2308	2294	2276	2272	4	80%
1951	2357	2347	2332	2317	2314	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2366	2369	2358	2351	2339	0	0%
1954	2359	2350	2336	2320	2318	0	0%
1955	2325	2313	2295	2276	2272	3	60%
1956	2368	2369	2358	2351	2339	0	0%
1957	2355	2354	2343	2338	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2339	2328	2311	2292	2289	2	40%
1960	2317	2313	2302	2285	2277	3	60%
1961	2333	2328	2313	2294	2291	2	40%
1962	2320	2315	2305	2286	2281	3	60%
1963	2368	2369	2358	2351	2339	0	0%
1964	2314	2301	2283	2261	2258	4	80%
1965	2343	2342	2332	2326	2323	0	0%
1966	2359	2348	2335	2319	2312	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2342	2330	2314	2295	2287	2	40%
1969	2368	2369	2358	2351	2339	0	0%
1970	2337	2327	2311	2299	2295	2	40%
1971	2368	2369	2358	2351	2339	0	0%
1972	2352	2342	2327	2310	2301	2	40%
1973	2361	2354	2340	2334	2331	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2333	2319	2302	2283	2280	3	60%
1977	2230	2200	2184	2179	2176	5	100%
1978	2332	2345	2338	2332	2331	0	0%
1979	2356	2345	2330	2320	2317	0	0%
1980	2361	2354	2344	2338	2335	0	0%
1981	2347	2334	2317	2298	2294	2	40%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2362	2355	2344	2339	2336	0	0%
1985	2333	2320	2302	2282	2278	3	60%
1986	2343	2333	2317	2299	2296	2	40%
1987	2318	2302	2283	2260	2255	4	80%
1988	2280	2272	2258	2248	2241	5	100%
1989	2300	2296	2283	2278	2274	5	100%
1990	2291	2281	2267	2255	2249	5	100%
1991	2236	2222	2216	2205	2198	5	100%

157 45%
Percent Availability During Recreation Season 55%

Trinity Reservoir 2295 msl Recreation Activity Threshold

TRINITY RESERVOIR

Trinity Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2334	2318	2309	2304	0	0%
1923	2310	2296	2277	2255	2253	3	60%
1924	2220	2184	2176	2169	2165	5	100%
1925	2277	2270	2257	2253	2251	5	100%
1926	2284	2272	2257	2252	2250	5	100%
1927	2338	2337	2325	2322	2317	0	0%
1928	2351	2336	2320	2302	2286	1	20%
1929	2280	2267	2248	2223	2220	5	100%
1930	2263	2251	2246	2241	2238	5	100%
1931	2230	2198	2184	2176	2173	5	100%
1932	2221	2219	2203	2184	2182	5	100%
1933	2218	2207	2184	2180	2177	5	100%
1934	2225	2189	2182	2175	2172	5	100%
1935	2246	2242	2224	2204	2191	5	100%
1936	2252	2245	2241	2226	2223	5	100%
1937	2259	2259	2247	2232	2229	5	100%
1938	2344	2345	2338	2333	2331	0	0%
1939	2319	2304	2287	2268	2266	3	60%
1940	2340	2325	2311	2293	2285	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2360	2362	2356	2351	2337	0	0%
1943	2352	2349	2338	2333	2325	0	0%
1944	2328	2314	2297	2279	2277	2	40%
1945	2318	2313	2303	2285	2277	2	40%
1946	2337	2324	2311	2293	2289	2	40%
1947	2297	2291	2279	2270	2268	4	80%
1948	2304	2311	2305	2302	2301	0	0%
1949	2332	2326	2316	2301	2299	0	0%
1950	2320	2308	2294	2274	2272	3	60%
1951	2346	2333	2317	2300	2298	0	0%
1952	2365	2365	2358	2351	2339	0	0%
1953	2360	2367	2358	2351	2339	0	0%
1954	2361	2348	2334	2322	2316	0	0%
1955	2328	2320	2304	2289	2288	2	40%
1956	2367	2367	2358	2351	2339	0	0%
1957	2358	2355	2341	2336	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2344	2331	2315	2297	2296	0	0%
1960	2316	2316	2306	2292	2290	2	40%
1961	2325	2325	2313	2299	2298	0	0%
1962	2327	2325	2311	2294	2284	2	40%
1963	2357	2350	2341	2336	2333	0	0%
1964	2321	2312	2295	2280	2278	3	60%
1965	2351	2343	2330	2328	2326	0	0%
1966	2362	2347	2333	2318	2313	0	0%
1967	2361	2364	2358	2351	2339	0	0%
1968	2348	2333	2318	2301	2291	1	20%
1969	2363	2364	2357	2351	2339	0	0%
1970	2332	2319	2311	2292	2281	2	40%
1971	2354	2352	2345	2340	2338	0	0%
1972	2353	2342	2327	2310	2298	0	0%
1973	2356	2344	2330	2322	2319	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2365	2369	2358	2351	2339	0	0%
1976	2322	2305	2287	2268	2266	3	60%
1977	2217	2184	2177	2175	2176	5	100%
1978	2316	2319	2314	2311	2312	0	0%
1979	2333	2323	2306	2288	2282	2	40%
1980	2344	2331	2317	2314	2312	0	0%
1981	2338	2326	2309	2295	2292	2	40%
1982	2361	2357	2351	2346	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2355	2342	2328	2325	2324	0	0%
1985	2331	2315	2297	2280	2278	2	40%
1986	2337	2316	2303	2285	2283	2	40%
1987	2308	2292	2272	2256	2253	4	80%
1988	2279	2263	2239	2217	2212	5	100%
1989	2263	2255	2249	2244	2242	5	100%
1990	2264	2252	2247	2231	2228	5	100%
1991	2225	2219	2214	2197	2190	5	100%

134 38%
Percent Availability During Recreation Season 62%

TRINITY RESERVOIR

**Trinity Elevation (ft)
State Permit Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2353	2352	2342	2334	2324	1	20%
1923	2342	2331	2316	2299	2291	5	100%
1924	2282	2246	2232	2220	2208	5	100%
1925	2317	2311	2302	2285	2277	2	40%
1926	2315	2300	2282	2260	2251	3	60%
1927	2362	2364	2356	2350	2336	0	0%
1928	2360	2349	2335	2320	2304	0	0%
1929	2304	2297	2279	2257	2242	3	60%
1930	2291	2285	2277	2268	2259	5	100%
1931	2266	2253	2229	2200	2184	5	100%
1932	2250	2212	2184	2176	2170	5	100%
1933	2240	2246	2232	2210	2193	5	100%
1934	2248	2236	2216	2184	2172	5	100%
1935	2255	2262	2249	2239	2221	5	100%
1936	2279	2278	2271	2262	2254	5	100%
1937	2293	2299	2287	2276	2260	4	80%
1938	2368	2369	2358	2351	2339	0	0%
1939	2326	2312	2295	2275	2267	3	60%
1940	2351	2342	2328	2312	2303	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2365	2362	2352	2346	2333	0	0%
1944	2329	2319	2304	2286	2274	2	40%
1945	2326	2330	2315	2298	2285	1	20%
1946	2313	2336	2323	2307	2296	0	0%
1947	2309	2298	2281	2259	2251	3	60%
1948	2317	2331	2322	2315	2309	0	0%
1949	2361	2353	2340	2325	2318	0	0%
1950	2346	2338	2323	2306	2300	0	0%
1951	2367	2358	2345	2331	2324	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2368	2369	2358	2351	2339	0	0%
1954	2364	2356	2344	2330	2322	0	0%
1955	2336	2327	2312	2296	2288	1	20%
1956	2368	2369	2358	2351	2339	0	0%
1957	2361	2359	2347	2340	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2345	2336	2321	2305	2297	0	0%
1960	2329	2325	2311	2294	2285	2	40%
1961	2342	2339	2326	2310	2303	0	0%
1962	2340	2334	2320	2304	2294	1	20%
1963	2368	2369	2358	2351	2339	0	0%
1964	2323	2313	2297	2279	2272	2	40%
1965	2364	2357	2348	2342	2336	0	0%
1966	2364	2356	2344	2330	2319	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2346	2336	2321	2303	2294	1	20%
1969	2368	2369	2358	2351	2339	0	0%
1970	2342	2334	2320	2308	2300	0	0%
1971	2368	2369	2358	2351	2339	0	0%
1972	2354	2347	2333	2318	2307	0	0%
1973	2368	2369	2358	2343	2336	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2359	2358	2351	2339	0	0%
1976	2342	2334	2320	2308	2300	0	0%
1977	2249	2226	2201	2176	2176	5	100%
1978	2340	2349	2343	2337	2332	0	0%
1979	2368	2369	2358	2351	2339	0	0%
1980	2360	2352	2352	2345	2339	0	0%
1981	2353	2341	2321	2297	2289	1	20%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2367	2362	2350	2344	2338	0	0%
1985	2368	2327	2311	2293	2285	2	40%
1986	2355	2347	2334	2318	2313	0	0%
1987	2334	2322	2306	2289	2279	2	40%
1988	2313	2306	2290	2270	2260	3	60%
1989	2344	2312	2302	2285	2277	2	40%
1990	2305	2300	2282	2261	2252	3	60%
1991	2245	2236	2221	2188	2176	5	100%

Percent Availability During Recreation Season

72%

97

28%

TRINITY RESERVOIR

Trinity Elevation (ft) Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msf?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2345	2335	2328	2320	0	0%
1923	2332	2320	2304	2287	2281	2	40%
1924	2251	2248	2240	2229	2220	5	100%
1925	2312	2311	2304	2286	2280	2	40%
1926	2300	2280	2259	2234	2229	4	80%
1927	2333	2340	2329	2322	2314	0	0%
1928	2343	2328	2312	2295	2278	2	40%
1929	2288	2284	2277	2256	2238	5	100%
1930	2284	2279	2271	2263	2255	5	100%
1931	2261	2254	2247	2221	2212	5	100%
1932	2241	2224	2215	2211	2206	5	100%
1933	2242	2249	2244	2232	2220	5	100%
1934	2262	2254	2247	2221	2212	5	100%
1935	2279	2277	2270	2261	2247	5	100%
1936	2277	2277	2270	2262	2254	5	100%
1937	2282	2286	2281	2274	2255	5	100%
1938	2354	2358	2352	2345	2339	0	0%
1939	2304	2288	2268	2245	2240	4	80%
1940	2325	2311	2303	2285	2276	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2363	2369	2358	2351	2339	0	0%
1943	2356	2351	2346	2339	2329	0	0%
1944	2324	2313	2298	2279	2271	2	40%
1945	2312	2314	2307	2290	2277	2	40%
1946	2324	2311	2304	2287	2277	2	40%
1947	2280	2272	2251	2226	2220	5	100%
1948	2282	2296	2293	2288	2283	4	80%
1949	2324	2318	2302	2284	2279	2	40%
1950	2310	2303	2294	2276	2270	3	60%
1951	2351	2338	2322	2307	2302	0	0%
1952	2365	2369	2358	2351	2339	0	0%
1953	2358	2368	2358	2351	2339	0	0%
1954	2357	2344	2330	2316	2310	0	0%
1955	2315	2303	2294	2276	2270	3	60%
1956	2360	2363	2356	2350	2339	0	0%
1957	2345	2345	2332	2325	2321	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2327	2313	2306	2289	2282	2	40%
1960	2294	2299	2293	2285	2280	4	80%
1961	2325	2319	2311	2294	2288	2	40%
1962	2316	2311	2304	2287	2280	2	40%
1963	2359	2355	2349	2342	2337	0	0%
1964	2304	2290	2271	2250	2246	4	80%
1965	2335	2334	2319	2313	2309	0	0%
1966	2347	2335	2321	2306	2297	0	0%
1967	2347	2358	2355	2350	2339	0	0%
1968	2337	2324	2311	2294	2285	2	40%
1969	2358	2366	2358	2351	2339	0	0%
1970	2330	2316	2309	2291	2282	2	40%
1971	2347	2353	2349	2343	2337	0	0%
1972	2348	2337	2323	2307	2297	0	0%
1973	2347	2343	2329	2320	2315	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2357	2369	2358	2351	2339	0	0%
1976	2337	2329	2315	2305	2299	0	0%
1977	2252	2228	2212	2208	2206	5	100%
1978	2325	2331	2325	2317	2315	0	0%
1979	2329	2327	2312	2295	2284	2	40%
1980	2352	2343	2338	2331	2325	0	0%
1981	2346	2332	2317	2300	2291	1	20%
1982	2360	2358	2352	2345	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2352	2345	2333	2327	2322	0	0%
1985	2317	2302	2284	2264	2257	3	60%
1986	2324	2311	2303	2285	2280	2	40%
1987	2296	2279	2258	2233	2227	4	80%
1988	2274	2275	2269	2260	2253	5	100%
1989	2305	2301	2294	2285	2279	3	60%
1990	2294	2290	2283	2262	2252	5	100%
1991	2238	2237	2230	2221	2213	5	100%

142 41%
Percent Availability During Recreation Season 59%

TRINITY RESERVOIR

Trinity Elevation (ft)
Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2330	2329	2324	2321	2318	0	0%
1923	2338	2334	2331	2327	2324	0	0%
1924	2327	2318	2314	2309	2306	0	0%
1925	2337	2334	2328	2325	2324	0	0%
1926	2321	2313	2307	2303	2301	0	0%
1927	2337	2338	2334	2331	2329	0	0%
1928	2323	2318	2312	2309	2307	0	0%
1929	2303	2297	2293	2289	2285	3	60%
1930	2305	2298	2292	2288	2285	3	60%
1931	2288	2280	2275	2270	2266	5	100%
1932	2275	2271	2264	2259	2256	5	100%
1933	2249	2256	2251	2247	2244	5	100%
1934	2278	2269	2263	2257	2254	5	100%
1935	2288	2283	2277	2273	2270	5	100%
1936	2277	2275	2269	2266	2263	5	100%
1937	2260	2264	2260	2256	2253	5	100%
1938	2277	2277	2272	2270	2268	5	100%
1939	2268	2258	2252	2246	2242	5	100%
1940	2301	2294	2286	2282	2280	4	80%
1941	2302	2311	2315	2315	2315	0	0%
1942	2330	2334	2331	2328	2327	0	0%
1943	2324	2320	2315	2312	2310	0	0%
1944	2313	2310	2307	2303	2300	0	0%
1945	2317	2314	2309	2306	2304	0	0%
1946	2310	2304	2299	2295	2293	2	40%
1947	2275	2271	2265	2261	2258	5	100%
1948	2270	2279	2274	2272	2270	5	100%
1949	2267	2264	2257	2254	2251	5	100%
1950	2242	2237	2230	2225	2221	5	100%
1951	2278	2269	2260	2256	2253	5	100%
1952	2286	2289	2287	2284	2282	5	100%
1953	2285	2293	2293	2290	2289	5	100%
1954	2310	2303	2297	2295	2293	2	40%
1955	2275	2271	2265	2261	2259	5	100%
1956	2276	2274	2269	2267	2266	5	100%
1957	2254	2253	2246	2242	2240	5	100%
1958	2293	2299	2298	2298	2297	1	20%
1959	2287	2283	2277	2273	2272	5	100%
1960	2255	2258	2252	2248	2245	5	100%
1961	2250	2256	2250	2246	2244	5	100%
1962	2248	2248	2241	2238	2235	5	100%
1963	2289	2283	2276	2271	2269	5	100%
1964	2251	2245	2238	2234	2232	5	100%
1965	2292	2285	2279	2276	2275	5	100%
1966	2296	2293	2288	2286	2285	4	80%
1967	2299	2307	2304	2301	2300	0	0%
1968	2300	2295	2290	2287	2285	4	80%
1969	2317	2320	2316	2313	2311	0	0%
1970	2311	2305	2298	2294	2292	2	40%
1971	2319	2319	2316	2313	2310	0	0%
1972	2318	2316	2311	2309	2307	0	0%
1973	2317	2312	2306	2302	2301	0	0%
1974	2300	2305	2302	2301	2300	0	0%
1975	2289	2299	2295	2292	2291	4	80%
1976	2274	2266	2260	2257	2254	5	100%
1977	2238	2226	2218	2211	2208	5	100%
1978	2247	2248	2246	2244	2246	5	100%
1979	2239	2232	2225	2219	2216	5	100%
1980	2261	2254	2248	2243	2240	5	100%
1981	2241	2230	2221	2215	2210	5	100%
1982	2240	2230	2224	2221	2219	5	100%
1983	2268	2296	2308	2311	2312	1	20%
1984	2310	2305	2299	2296	2294	1	20%
1985	2290	2283	2277	2273	2270	5	100%
1986	2312	2305	2298	2294	2293	2	40%
1987	2293	2286	2279	2276	2272	5	100%
1988	2289	2287	2282	2278	2274	5	100%
1989	2289	2283	2277	2273	2271	5	100%
1990	2247	2241	2233	2228	2224	5	100%
1991	2185	2173	2160	2152	2146	5	100%

228 65%
Percent Availability During Recreation Season 35%

TRINITY RESERVOIR

Trinity Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2339	2342	2329	2320	2307	0	0%
1923	2328	2317	2300	2279	2268	2	40%
1924	2248	2241	2227	2221	2215	5	100%
1925	2302	2296	2284	2275	2264	3	60%
1926	2296	2290	2280	2268	2255	4	80%
1927	2344	2344	2333	2325	2312	0	0%
1928	2348	2329	2311	2292	2271	2	40%
1929	2278	2272	2262	2235	2220	5	100%
1930	2264	2262	2253	2241	2226	5	100%
1931	2232	2229	2224	2218	2212	5	100%
1932	2244	2238	2226	2221	2215	5	100%
1933	2238	2252	2243	2231	2216	5	100%
1934	2258	2254	2242	2229	2213	5	100%
1935	2271	2268	2260	2249	2233	5	100%
1936	2272	2265	2253	2242	2228	5	100%
1937	2269	2273	2267	2255	2230	5	100%
1938	2347	2343	2335	2327	2319	0	0%
1939	2328	2314	2296	2275	2263	2	40%
1940	2339	2331	2320	2302	2286	1	20%
1941	2368	2369	2358	2351	2339	0	0%
1942	2362	2366	2358	2351	2337	0	0%
1943	2351	2346	2334	2326	2312	0	0%
1944	2326	2325	2313	2296	2283	1	20%
1945	2318	2315	2303	2291	2281	2	40%
1946	2339	2325	2311	2292	2277	2	40%
1947	2294	2293	2283	2272	2260	5	100%
1948	2302	2309	2299	2289	2279	2	40%
1949	2319	2317	2305	2296	2283	1	20%
1950	2309	2308	2292	2270	2259	3	60%
1951	2341	2333	2323	2305	2296	0	0%
1952	2365	2368	2358	2351	2339	0	0%
1953	2356	2362	2358	2351	2339	0	0%
1954	2353	2335	2326	2309	2299	0	0%
1955	2308	2308	2298	2288	2275	2	40%
1956	2365	2360	2353	2345	2338	0	0%
1957	2346	2344	2330	2322	2313	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2342	2327	2311	2292	2279	2	40%
1960	2303	2301	2289	2280	2269	3	60%
1961	2317	2317	2305	2296	2283	1	20%
1962	2319	2320	2311	2293	2282	2	40%
1963	2358	2352	2342	2334	2325	0	0%
1964	2327	2321	2305	2289	2277	2	40%
1965	2352	2341	2329	2322	2314	0	0%
1966	2358	2344	2327	2311	2297	0	0%
1967	2353	2360	2353	2347	2339	0	0%
1968	2344	2331	2312	2293	2283	2	40%
1969	2360	2364	2356	2349	2339	0	0%
1970	2332	2325	2314	2301	2287	1	20%
1971	2354	2356	2349	2341	2333	0	0%
1972	2351	2340	2321	2304	2289	1	20%
1973	2349	2341	2326	2317	2309	0	0%
1974	2365	2365	2358	2351	2339	0	0%
1975	2361	2369	2358	2351	2339	0	0%
1976	2336	2330	2317	2307	2295	1	20%
1977	2272	2251	2226	2221	2217	5	100%
1978	2335	2332	2326	2318	2311	0	0%
1979	2339	2340	2324	2308	2299	0	0%
1980	2350	2340	2331	2322	2314	0	0%
1981	2343	2338	2321	2305	2295	1	20%
1982	2359	2351	2343	2336	2327	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2351	2342	2327	2319	2311	0	0%
1985	2335	2321	2304	2289	2276	2	40%
1986	2340	2333	2317	2301	2289	1	20%
1987	2314	2307	2290	2271	2259	3	60%
1988	2295	2295	2286	2265	2252	5	100%
1989	2299	2288	2274	2263	2252	4	80%
1990	2270	2269	2257	2245	2231	5	100%
1991	2220	2219	2214	2209	2203	5	100%

128 37%
Percent Availability During Recreation Season 63%

TRINITY RESERVOIR

Trinity Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Trinity Center Ramp threshold of 2295 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2346	2334	2328	2323	0	0%
1923	2329	2316	2298	2278	2274	2	40%
1924	2227	2219	2210	2192	2185	5	100%
1925	2300	2301	2290	2285	2280	3	60%
1926	2308	2290	2269	2243	2238	4	80%
1927	2343	2349	2339	2333	2328	0	0%
1928	2358	2345	2330	2312	2303	0	0%
1929	2291	2279	2265	2250	2244	5	100%
1930	2284	2276	2261	2255	2250	5	100%
1931	2241	2226	2216	2190	2183	5	100%
1932	2230	2208	2184	2179	2173	5	100%
1933	2224	2228	2220	2196	2185	5	100%
1934	2238	2221	2210	2185	2179	5	100%
1935	2257	2250	2233	2228	2219	5	100%
1936	2262	2259	2248	2242	2238	5	100%
1937	2275	2276	2264	2258	2252	5	100%
1938	2368	2369	2358	2351	2339	0	0%
1939	2316	2300	2279	2255	2251	3	60%
1940	2325	2317	2306	2286	2282	2	40%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2360	2355	2345	2339	2332	0	0%
1944	2326	2314	2297	2276	2272	2	40%
1945	2311	2314	2304	2285	2278	2	40%
1946	2335	2326	2311	2292	2287	2	40%
1947	2301	2293	2272	2248	2237	4	80%
1948	2289	2304	2294	2290	2287	4	80%
1949	2332	2328	2312	2294	2290	2	40%
1950	2312	2308	2294	2276	2272	3	60%
1951	2357	2347	2332	2317	2314	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2366	2369	2358	2351	2339	0	0%
1954	2359	2350	2336	2320	2318	0	0%
1955	2325	2313	2295	2276	2272	3	60%
1956	2368	2369	2358	2351	2339	0	0%
1957	2355	2354	2343	2338	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2339	2328	2311	2292	2289	2	40%
1960	2317	2313	2302	2285	2277	2	40%
1961	2333	2328	2313	2294	2291	2	40%
1962	2320	2315	2305	2286	2281	2	40%
1963	2368	2369	2358	2351	2339	0	0%
1964	2314	2301	2283	2261	2258	3	60%
1965	2343	2342	2332	2326	2323	0	0%
1966	2359	2348	2335	2319	2312	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2342	2330	2314	2295	2287	2	40%
1969	2368	2369	2358	2351	2339	0	0%
1970	2337	2327	2311	2299	2295	1	20%
1971	2368	2369	2358	2351	2339	0	0%
1972	2352	2342	2327	2310	2301	0	0%
1973	2361	2354	2340	2334	2331	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2333	2319	2302	2283	2280	2	40%
1977	2230	2200	2184	2179	2176	5	100%
1978	2332	2345	2338	2332	2331	0	0%
1979	2356	2345	2330	2320	2317	0	0%
1980	2361	2354	2344	2338	2335	0	0%
1981	2347	2334	2317	2298	2294	1	20%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2362	2355	2344	2339	2336	0	0%
1985	2333	2320	2302	2282	2278	2	40%
1986	2343	2333	2317	2299	2296	0	0%
1987	2318	2302	2283	2260	2255	3	60%
1988	2280	2272	2258	2248	2241	5	100%
1989	2300	2296	2283	2278	2274	3	60%
1990	2291	2281	2267	2255	2249	5	100%
1991	2236	2222	2216	2205	2198	5	100%

131 37%
Percent Availability During Recreation Season 63%

Trinity Reservoir 2270 msl Recreation Activity Threshold

TRINITY RESERVOIR

Trinity Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2334	2318	2309	2304	0	0%
1923	2310	2296	2277	2255	2253	2	40%
1924	2220	2184	2176	2169	2165	5	100%
1925	2277	2270	2257	2253	2251	4	80%
1926	2284	2272	2257	2252	2250	3	60%
1927	2338	2337	2325	2322	2317	0	0%
1928	2351	2336	2320	2302	2286	0	0%
1929	2280	2267	2248	2223	2220	4	80%
1930	2263	2251	2246	2241	2238	5	100%
1931	2230	2198	2184	2176	2173	5	100%
1932	2221	2219	2203	2184	2182	5	100%
1933	2218	2207	2184	2180	2177	5	100%
1934	2225	2189	2182	2175	2172	5	100%
1935	2246	2242	2224	2204	2191	5	100%
1936	2252	2245	2241	2226	2223	5	100%
1937	2259	2259	2247	2232	2229	5	100%
1938	2344	2345	2338	2333	2331	0	0%
1939	2319	2304	2287	2268	2266	2	40%
1940	2340	2325	2311	2293	2285	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2360	2362	2356	2351	2337	0	0%
1943	2352	2349	2338	2333	2325	0	0%
1944	2328	2314	2297	2279	2277	0	0%
1945	2318	2313	2303	2285	2277	0	0%
1946	2337	2324	2311	2293	2289	0	0%
1947	2297	2291	2279	2270	2268	2	40%
1948	2304	2311	2305	2302	2301	0	0%
1949	2332	2326	2316	2301	2299	0	0%
1950	2320	2308	2294	2274	2272	0	0%
1951	2346	2333	2317	2300	2298	0	0%
1952	2365	2365	2358	2351	2339	0	0%
1953	2360	2367	2358	2351	2339	0	0%
1954	2361	2348	2334	2322	2316	0	0%
1955	2328	2320	2304	2289	2288	0	0%
1956	2367	2367	2358	2351	2339	0	0%
1957	2358	2355	2341	2336	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2344	2331	2315	2297	2296	0	0%
1960	2316	2316	2306	2292	2290	0	0%
1961	2325	2325	2313	2299	2298	0	0%
1962	2327	2325	2311	2294	2284	0	0%
1963	2357	2350	2341	2336	2333	0	0%
1964	2321	2312	2295	2280	2278	0	0%
1965	2351	2343	2330	2328	2326	0	0%
1966	2362	2347	2333	2318	2313	0	0%
1967	2361	2364	2358	2351	2339	0	0%
1968	2348	2333	2318	2301	2291	0	0%
1969	2363	2364	2357	2351	2339	0	0%
1970	2332	2319	2311	2292	2281	0	0%
1971	2354	2352	2345	2340	2338	0	0%
1972	2353	2342	2327	2310	2298	0	0%
1973	2356	2344	2330	2322	2319	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2365	2369	2358	2351	2339	0	0%
1976	2322	2305	2287	2268	2266	2	40%
1977	2217	2184	2177	2175	2176	5	100%
1978	2316	2319	2314	2311	2312	0	0%
1979	2333	2323	2306	2288	2282	0	0%
1980	2344	2331	2317	2314	2312	0	0%
1981	2338	2326	2309	2295	2292	0	0%
1982	2361	2357	2351	2346	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2355	2342	2328	2325	2324	0	0%
1985	2331	2315	2297	2280	2278	0	0%
1986	2337	2316	2303	2285	2283	0	0%
1987	2308	2292	2272	2256	2253	2	40%
1988	2279	2263	2239	2217	2212	4	80%
1989	2263	2255	2249	2244	2242	5	100%
1990	2264	2252	2247	2231	2228	5	100%
1991	2225	2219	2214	2197	2190	5	100%

90 26%
Percent Availability During Recreation Season 74%

TRINITY RESERVOIR

**Trinity Elevation (ft)
State Permit Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2353	2352	2342	2334	2324	0	0%
1923	2342	2331	2316	2299	2291	0	0%
1924	2262	2248	2232	2220	2208	5	100%
1925	2317	2311	2302	2285	2277	0	0%
1926	2315	2300	2282	2260	2251	2	40%
1927	2362	2364	2356	2350	2336	0	0%
1928	2360	2349	2335	2320	2304	0	0%
1929	2304	2297	2279	2257	2242	2	40%
1930	2291	2285	2277	2268	2259	2	40%
1931	2266	2253	2229	2200	2184	5	100%
1932	2230	2212	2184	2178	2170	5	100%
1933	2240	2246	2232	2210	2193	5	100%
1934	2248	2236	2216	2184	2172	5	100%
1935	2265	2262	2249	2239	2221	5	100%
1936	2279	2278	2271	2262	2254	2	40%
1937	2293	2299	2287	2276	2260	1	20%
1938	2368	2369	2358	2351	2339	0	0%
1939	2326	2312	2295	2275	2267	1	20%
1940	2351	2342	2328	2312	2303	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2365	2362	2352	2346	2333	0	0%
1944	2329	2319	2304	2286	2274	0	0%
1945	2326	2330	2315	2298	2285	0	0%
1946	2343	2336	2323	2307	2296	0	0%
1947	2309	2298	2281	2259	2251	2	40%
1948	2317	2331	2322	2315	2309	0	0%
1949	2361	2353	2340	2325	2318	0	0%
1950	2346	2337	2323	2306	2300	0	0%
1951	2367	2358	2345	2331	2324	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2368	2369	2358	2351	2339	0	0%
1954	2364	2356	2344	2330	2322	0	0%
1955	2336	2327	2312	2296	2288	0	0%
1956	2368	2369	2358	2351	2339	0	0%
1957	2361	2359	2347	2340	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2345	2336	2321	2305	2297	0	0%
1960	2329	2325	2311	2294	2285	0	0%
1961	2342	2339	2326	2310	2303	0	0%
1962	2340	2334	2320	2304	2294	0	0%
1963	2368	2369	2358	2351	2339	0	0%
1964	2323	2313	2297	2279	2272	0	0%
1965	2364	2357	2348	2342	2336	0	0%
1966	2364	2356	2344	2330	2319	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2346	2336	2321	2305	2294	0	0%
1969	2368	2369	2358	2351	2339	0	0%
1970	2342	2334	2320	2308	2300	0	0%
1971	2368	2369	2358	2351	2339	0	0%
1972	2354	2347	2333	2318	2307	0	0%
1973	2368	2362	2349	2343	2336	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2339	2328	2313	2297	2289	0	0%
1977	2249	2226	2201	2185	2176	5	100%
1978	2340	2349	2343	2337	2332	0	0%
1979	2368	2359	2346	2331	2322	0	0%
1980	2366	2360	2352	2345	2339	0	0%
1981	2353	2341	2327	2310	2302	0	0%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2367	2362	2350	2344	2338	0	0%
1985	2338	2327	2311	2293	2285	0	0%
1986	2355	2347	2334	2318	2313	0	0%
1987	2334	2322	2306	2289	2279	0	0%
1988	2313	2306	2290	2270	2260	2	40%
1989	2324	2312	2302	2285	2277	0	0%
1990	2305	2300	2282	2261	2252	2	40%
1991	2245	2236	2221	2188	2176	5	100%

56 16%
Percent Availability During Recreation Season 84%

TRINITY RESERVOIR

Trinity Elevation (ft) Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2345	2335	2328	2320	0	0%
1923	2332	2320	2304	2287	2281	0	0%
1924	2251	2248	2240	2229	2220	5	100%
1925	2312	2311	2304	2286	2280	0	0%
1926	2300	2280	2259	2234	2229	3	60%
1927	2333	2340	2329	2322	2314	0	0%
1928	2343	2328	2312	2295	2278	0	0%
1929	2288	2284	2277	2256	2238	2	40%
1930	2284	2279	2271	2263	2255	2	40%
1931	2261	2254	2247	2221	2212	5	100%
1932	2241	2224	2215	2211	2206	5	100%
1933	2242	2249	2244	2232	2220	5	100%
1934	2262	2254	2247	2221	2212	5	100%
1935	2279	2277	2270	2261	2247	3	60%
1936	2277	2277	2270	2262	2254	3	60%
1937	2282	2286	2281	2274	2255	1	20%
1938	2354	2358	2352	2345	2339	0	0%
1939	2304	2288	2268	2245	2240	3	60%
1940	2325	2311	2303	2285	2276	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2363	2369	2358	2351	2339	0	0%
1943	2356	2351	2346	2339	2329	0	0%
1944	2324	2313	2298	2279	2271	0	0%
1945	2312	2314	2307	2290	2277	0	0%
1946	2324	2311	2304	2287	2277	0	0%
1947	2280	2272	2251	2226	2220	3	60%
1948	2282	2296	2293	2288	2283	0	0%
1949	2324	2318	2302	2284	2279	0	0%
1950	2310	2303	2294	2276	2270	1	20%
1951	2351	2338	2322	2307	2302	0	0%
1952	2365	2369	2358	2351	2339	0	0%
1953	2358	2368	2358	2351	2339	0	0%
1954	2357	2344	2330	2316	2310	0	0%
1955	2315	2303	2294	2276	2270	1	20%
1956	2360	2363	2356	2350	2339	0	0%
1957	2345	2345	2332	2325	2321	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2327	2313	2306	2289	2282	0	0%
1960	2294	2299	2293	2285	2280	0	0%
1961	2325	2319	2311	2294	2288	0	0%
1962	2316	2311	2304	2287	2280	0	0%
1963	2359	2355	2349	2342	2337	0	0%
1964	2304	2290	2271	2250	2246	2	40%
1965	2335	2334	2319	2313	2309	0	0%
1966	2347	2335	2321	2306	2297	0	0%
1967	2347	2358	2355	2350	2339	0	0%
1968	2337	2324	2311	2294	2285	0	0%
1969	2358	2366	2358	2351	2339	0	0%
1970	2330	2316	2309	2291	2282	0	0%
1971	2347	2353	2349	2343	2337	0	0%
1972	2348	2337	2323	2307	2297	0	0%
1973	2347	2343	2329	2320	2315	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2357	2369	2358	2351	2339	0	0%
1976	2337	2329	2315	2305	2299	0	0%
1977	2252	2228	2212	2208	2206	5	100%
1978	2325	2331	2325	2317	2315	0	0%
1979	2329	2327	2312	2295	2284	0	0%
1980	2352	2343	2338	2331	2325	0	0%
1981	2346	2332	2317	2300	2291	0	0%
1982	2360	2358	2352	2345	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2352	2345	2333	2327	2322	0	0%
1985	2317	2302	2284	2264	2257	2	40%
1986	2324	2311	2303	2285	2280	0	0%
1987	2296	2279	2258	2233	2227	3	60%
1988	2274	2275	2269	2260	2253	3	60%
1989	2305	2301	2294	2285	2279	0	0%
1990	2294	2290	2283	2262	2252	2	40%
1991	2238	2237	2230	2221	2213	5	100%

69 20%
Percent Availability During Recreation Season 80%

TRINITY RESERVOIR

**Trinity Elevation (ft)
Revised Max Flow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2330	2329	2324	2321	2318	0	0%
1923	2338	2334	2331	2327	2324	0	0%
1924	2327	2318	2314	2309	2306	0	0%
1925	2337	2334	2328	2325	2324	0	0%
1926	2321	2313	2307	2303	2301	0	0%
1927	2337	2338	2334	2331	2329	0	0%
1928	2323	2318	2312	2309	2307	0	0%
1929	2303	2297	2293	2289	2285	0	0%
1930	2305	2298	2292	2288	2285	0	0%
1931	2288	2280	2275	2270	2266	2	40%
1932	2275	2271	2264	2259	2256	3	60%
1933	2249	2256	2251	2247	2244	5	100%
1934	2278	2269	2263	2257	2254	4	80%
1935	2288	2283	2277	2273	2270	1	20%
1936	2277	2275	2269	2266	2263	3	60%
1937	2260	2264	2260	2256	2253	5	100%
1938	2277	2277	2272	2270	2268	2	40%
1939	2268	2258	2252	2246	2242	5	100%
1940	2301	2294	2286	2282	2280	0	0%
1941	2302	2311	2315	2315	2315	0	0%
1942	2330	2334	2331	2328	2327	0	0%
1943	2324	2320	2315	2312	2310	0	0%
1944	2313	2310	2307	2303	2300	0	0%
1945	2317	2314	2309	2306	2304	0	0%
1946	2310	2304	2299	2295	2293	0	0%
1947	2275	2271	2265	2261	2258	3	60%
1948	2270	2279	2274	2272	2270	2	40%
1949	2267	2264	2257	2254	2251	5	100%
1950	2242	2237	2230	2225	2221	5	100%
1951	2278	2269	2260	2256	2253	4	80%
1952	2286	2289	2287	2284	2282	0	0%
1953	2285	2293	2293	2290	2289	0	0%
1954	2310	2303	2297	2295	2293	0	0%
1955	2275	2271	2265	2261	2259	3	60%
1956	2276	2274	2269	2267	2266	3	60%
1957	2254	2253	2246	2242	2240	5	100%
1958	2293	2299	2298	2298	2297	0	0%
1959	2287	2283	2277	2273	2272	0	0%
1960	2255	2258	2252	2248	2245	5	100%
1961	2250	2256	2250	2246	2244	5	100%
1962	2248	2248	2241	2238	2235	5	100%
1963	2289	2283	2276	2271	2269	1	20%
1964	2251	2245	2238	2234	2232	5	100%
1965	2292	2285	2279	2276	2275	0	0%
1966	2296	2293	2288	2286	2285	0	0%
1967	2299	2307	2304	2301	2300	0	0%
1968	2300	2295	2290	2287	2285	0	0%
1969	2317	2320	2316	2313	2311	0	0%
1970	2311	2305	2298	2294	2292	0	0%
1971	2319	2319	2316	2313	2310	0	0%
1972	2318	2316	2311	2309	2307	0	0%
1973	2317	2312	2306	2302	2301	0	0%
1974	2300	2305	2302	2301	2300	0	0%
1975	2289	2299	2295	2292	2291	0	0%
1976	2274	2266	2260	2257	2254	4	80%
1977	2238	2226	2218	2211	2208	5	100%
1978	2247	2248	2246	2244	2246	5	100%
1979	2239	2232	2225	2219	2216	5	100%
1980	2261	2254	2248	2243	2240	5	100%
1981	2241	2230	2221	2215	2210	5	100%
1982	2240	2230	2224	2221	2219	5	100%
1983	2268	2296	2308	2311	2312	1	20%
1984	2310	2305	2299	2296	2294	0	0%
1985	2290	2283	2277	2273	2270	1	20%
1986	2312	2305	2298	2294	2293	0	0%
1987	2293	2286	2279	2276	2272	0	0%
1988	2289	2287	2282	2278	2274	0	0%
1989	2289	2283	2277	2273	2271	0	0%
1990	2247	2241	2233	2228	2224	5	100%
1991	2185	2173	2160	2152	2146	5	100%

127

36%

64%

Percent Availability During Recreation Season

TRINITY RESERVOIR

Trinity Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2339	2342	2329	2320	2307	0	0%
1923	2328	2317	2300	2279	2268	1	20%
1924	2248	2241	2227	2221	2215	5	100%
1925	2302	2296	2284	2275	2264	1	20%
1926	2296	2290	2280	2268	2255	2	40%
1927	2344	2344	2333	2325	2312	0	0%
1928	2348	2329	2311	2292	2271	0	0%
1929	2278	2272	2262	2235	2220	3	60%
1930	2264	2262	2253	2241	2226	5	100%
1931	2232	2229	2224	2218	2212	5	100%
1932	2244	2238	2226	2221	2215	5	100%
1933	2238	2252	2243	2231	2216	5	100%
1934	2258	2254	2242	2229	2213	5	100%
1935	2271	2268	2260	2249	2233	4	80%
1936	2272	2265	2253	2242	2228	4	80%
1937	2269	2273	2267	2255	2230	4	80%
1938	2347	2343	2335	2327	2319	0	0%
1939	2328	2314	2296	2275	2263	1	20%
1940	2339	2331	2320	2302	2286	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2362	2366	2358	2351	2337	0	0%
1943	2351	2346	2334	2326	2312	0	0%
1944	2326	2325	2313	2296	2283	0	0%
1945	2318	2315	2303	2291	2281	0	0%
1946	2339	2325	2311	2292	2277	0	0%
1947	2294	2293	2283	2272	2260	1	20%
1948	2302	2309	2299	2289	2279	0	0%
1949	2319	2317	2305	2296	2283	0	0%
1950	2309	2308	2292	2270	2259	2	40%
1951	2341	2333	2323	2305	2296	0	0%
1952	2365	2368	2358	2351	2339	0	0%
1953	2356	2362	2358	2351	2339	0	0%
1954	2353	2335	2326	2309	2299	0	0%
1955	2308	2308	2298	2286	2275	0	0%
1956	2365	2360	2353	2345	2338	0	0%
1957	2346	2344	2330	2322	2313	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2342	2327	2311	2292	2279	0	0%
1960	2303	2301	2289	2280	2269	1	20%
1961	2317	2317	2305	2296	2283	0	0%
1962	2319	2320	2311	2293	2282	0	0%
1963	2358	2352	2342	2334	2325	0	0%
1964	2327	2321	2305	2289	2277	0	0%
1965	2352	2341	2329	2322	2314	0	0%
1966	2358	2344	2327	2311	2297	0	0%
1967	2353	2360	2353	2347	2339	0	0%
1968	2344	2331	2312	2293	2283	0	0%
1969	2360	2364	2356	2349	2339	0	0%
1970	2332	2325	2314	2301	2287	0	0%
1971	2354	2356	2349	2341	2333	0	0%
1972	2351	2340	2321	2304	2289	0	0%
1973	2349	2341	2326	2317	2309	0	0%
1974	2365	2365	2358	2351	2339	0	0%
1975	2361	2369	2358	2351	2339	0	0%
1976	2336	2330	2317	2307	2295	0	0%
1977	2272	2251	2226	2221	2217	4	80%
1978	2335	2332	2326	2318	2311	0	0%
1979	2339	2340	2324	2308	2299	0	0%
1980	2350	2340	2331	2322	2314	0	0%
1981	2343	2338	2321	2305	2295	0	0%
1982	2359	2351	2343	2336	2327	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2351	2342	2327	2319	2311	0	0%
1985	2335	2321	2304	2289	2276	0	0%
1986	2340	2333	2317	2301	2289	0	0%
1987	2314	2307	2290	2271	2259	1	20%
1988	2295	2295	2286	2265	2252	2	40%
1989	2299	2288	2274	2263	2252	2	40%
1990	2270	2269	2257	2245	2231	5	100%
1991	2220	2219	2214	2209	2203	5	100%

73 21%
Percent Availability During Recreation Season 79%

TRINITY RESERVOIR

**Trinity Elevation (ft)
Existing Conditions**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Campground Use Declines threshold of 2270 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2346	2334	2328	2323	0	0%
1923	2329	2316	2298	2278	2274	0	0%
1924	2227	2219	2210	2192	2185	5	100%
1925	2300	2301	2290	2285	2280	0	0%
1926	2308	2290	2269	2243	2238	3	60%
1927	2343	2349	2339	2333	2328	0	0%
1928	2358	2345	2330	2312	2303	0	0%
1929	2291	2279	2265	2250	2244	3	60%
1930	2284	2276	2261	2255	2250	3	60%
1931	2241	2226	2216	2190	2183	5	100%
1932	2230	2208	2184	2179	2173	5	100%
1933	2224	2228	2220	2196	2185	5	100%
1934	2238	2221	2210	2185	2179	5	100%
1935	2257	2250	2233	2228	2219	5	100%
1936	2262	2259	2248	2242	2238	5	100%
1937	2275	2276	2264	2256	2252	3	60%
1938	2368	2369	2358	2351	2339	0	0%
1939	2316	2300	2279	2255	2251	2	40%
1940	2325	2317	2306	2286	2282	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2359	2358	2351	2339	0	0%
1943	2360	2355	2345	2339	2332	0	0%
1944	2336	2314	2297	2276	2272	0	0%
1945	2311	2314	2304	2285	2278	0	0%
1946	2335	2326	2314	2292	2287	0	0%
1947	2301	2293	2272	2248	2237	2	40%
1948	2289	2304	2294	2290	2287	0	0%
1949	2332	2328	2312	2294	2290	0	0%
1950	2312	2308	2294	2276	2272	0	0%
1951	2357	2347	2332	2317	2314	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2366	2369	2358	2351	2339	0	0%
1954	2359	2350	2336	2320	2318	0	0%
1955	2325	2313	2295	2276	2272	0	0%
1956	2368	2369	2358	2351	2339	0	0%
1957	2355	2354	2343	2338	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2359	2358	2348	2311	2292	2289	0
1960	2317	2313	2302	2295	2277	0	0%
1961	2333	2328	2313	2294	2291	0	0%
1962	2320	2315	2305	2286	2281	0	0%
1963	2368	2369	2358	2351	2339	0	0%
1964	2314	2301	2283	2261	2258	2	40%
1965	2343	2342	2332	2326	2323	0	0%
1966	2359	2348	2335	2319	2312	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2342	2330	2314	2295	2287	0	0%
1969	2368	2369	2358	2351	2339	0	0%
1970	2337	2327	2311	2299	2295	0	0%
1971	2368	2369	2358	2351	2339	0	0%
1972	2352	2342	2327	2310	2301	0	0%
1973	2361	2354	2340	2334	2331	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2333	2319	2302	2283	2280	0	0%
1977	2230	2200	2184	2179	2176	5	100%
1978	2332	2345	2338	2332	2331	0	0%
1979	2356	2345	2330	2320	2317	0	0%
1980	2361	2354	2344	2338	2335	0	0%
1981	2347	2334	2317	2298	2294	0	0%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2362	2355	2344	2339	2336	0	0%
1985	2333	2320	2302	2282	2278	0	0%
1986	2343	2333	2317	2299	2295	2	40%
1987	2318	2302	2283	2260	2255	2	60%
1988	2280	2272	2258	2248	2241	3	60%
1989	2300	2296	2283	2278	2274	0	0%
1990	2291	2281	2267	2255	2249	3	60%
1991	2236	2222	2216	2205	2198	5	100%

Percent Availability During Recreation Season

71
80%

Trinity Reservoir 2170 msl Recreation Activity Threshold

TRINITY RESERVOIR

Trinity Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2334	2318	2309	2304	0	0%
1923	2310	2296	2277	2255	2253	0	0%
1924	2220	2184	2176	2169	2165	2	40%
1925	2277	2270	2257	2253	2251	0	0%
1926	2284	2272	2257	2252	2250	0	0%
1927	2338	2337	2325	2322	2317	0	0%
1928	2351	2336	2320	2302	2286	0	0%
1929	2280	2267	2248	2223	2220	0	0%
1930	2263	2251	2246	2241	2238	0	0%
1931	2230	2198	2184	2176	2173	0	0%
1932	2221	2219	2203	2184	2182	0	0%
1933	2218	2207	2184	2180	2177	0	0%
1934	2225	2189	2182	2175	2172	0	0%
1935	2246	2242	2224	2204	2191	0	0%
1936	2252	2245	2241	2226	2223	0	0%
1937	2259	2259	2247	2232	2229	0	0%
1938	2344	2345	2338	2333	2331	0	0%
1939	2319	2304	2287	2268	2266	0	0%
1940	2340	2325	2311	2293	2285	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2360	2362	2356	2351	2337	0	0%
1943	2352	2349	2338	2333	2325	0	0%
1944	2328	2314	2297	2279	2277	0	0%
1945	2318	2313	2303	2285	2277	0	0%
1946	2337	2324	2311	2293	2289	0	0%
1947	2297	2291	2279	2270	2268	0	0%
1948	2304	2311	2305	2302	2301	0	0%
1949	2332	2326	2316	2301	2299	0	0%
1950	2320	2308	2294	2274	2272	0	0%
1951	2346	2333	2317	2300	2298	0	0%
1952	2365	2365	2358	2351	2339	0	0%
1953	2360	2367	2358	2351	2339	0	0%
1954	2361	2348	2334	2322	2316	0	0%
1955	2328	2320	2304	2289	2288	0	0%
1956	2367	2367	2358	2351	2339	0	0%
1957	2358	2355	2341	2336	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2344	2331	2315	2297	2296	0	0%
1960	2316	2316	2306	2292	2290	0	0%
1961	2325	2325	2313	2299	2298	0	0%
1962	2327	2325	2311	2294	2284	0	0%
1963	2357	2350	2341	2336	2333	0	0%
1964	2321	2312	2295	2280	2278	0	0%
1965	2351	2343	2330	2328	2326	0	0%
1966	2362	2347	2333	2318	2313	0	0%
1967	2361	2364	2358	2351	2339	0	0%
1968	2348	2333	2318	2301	2291	0	0%
1969	2363	2364	2357	2351	2339	0	0%
1970	2332	2319	2311	2292	2281	0	0%
1971	2354	2352	2345	2340	2338	0	0%
1972	2353	2342	2327	2310	2298	0	0%
1973	2356	2344	2330	2322	2319	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2365	2369	2358	2351	2339	0	0%
1976	2322	2305	2287	2268	2266	0	0%
1977	2217	2184	2177	2175	2176	0	0%
1978	2316	2319	2314	2311	2312	0	0%
1979	2333	2323	2306	2288	2282	0	0%
1980	2344	2331	2317	2314	2312	0	0%
1981	2338	2326	2309	2295	2292	0	0%
1982	2361	2357	2351	2346	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2355	2342	2328	2325	2324	0	0%
1985	2331	2315	2297	2280	2278	0	0%
1986	2337	2316	2303	2285	2283	0	0%
1987	2308	2292	2272	2256	2253	0	0%
1988	2279	2263	2239	2217	2212	0	0%
1989	2263	2255	2249	2244	2242	0	0%
1990	2264	2252	2247	2231	2228	0	0%
1991	2225	2219	2214	2197	2190	0	0%

Percent Availability During Recreation Season

2 1%
99%

TRINITY RESERVOIR

Trinity Elevation (ft)
State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2353	2352	2342	2334	2324	0	0%
1923	2342	2331	2316	2299	2291	0	0%
1924	2282	2248	2232	2220	2208	0	0%
1925	2317	2311	2302	2285	2277	0	0%
1926	2315	2300	2282	2260	2251	0	0%
1927	2362	2364	2356	2350	2336	0	0%
1928	2360	2349	2335	2320	2304	0	0%
1929	2304	2297	2279	2257	2242	0	0%
1930	2291	2285	2277	2268	2259	0	0%
1931	2266	2253	2229	2200	2184	0	0%
1932	2230	2212	2184	2178	2170	1	20%
1933	2240	2246	2232	2210	2193	0	0%
1934	2248	2236	2216	2184	2172	0	0%
1935	2265	2262	2249	2239	2221	0	0%
1936	2279	2278	2271	2262	2254	0	0%
1937	2293	2299	2287	2276	2260	0	0%
1938	2368	2369	2358	2351	2339	0	0%
1939	2326	2312	2295	2275	2267	0	0%
1940	2351	2342	2328	2312	2303	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2365	2362	2352	2346	2333	0	0%
1944	2329	2319	2304	2286	2274	0	0%
1945	2326	2330	2315	2298	2285	0	0%
1946	2343	2336	2323	2307	2296	0	0%
1947	2309	2298	2281	2259	2251	0	0%
1948	2317	2331	2322	2315	2309	0	0%
1949	2361	2353	2340	2325	2318	0	0%
1950	2346	2337	2323	2306	2300	0	0%
1951	2367	2358	2345	2331	2324	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2368	2369	2358	2351	2339	0	0%
1954	2364	2356	2344	2330	2322	0	0%
1955	2336	2327	2312	2296	2288	0	0%
1956	2368	2369	2358	2351	2339	0	0%
1957	2361	2359	2347	2340	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2345	2336	2321	2305	2297	0	0%
1960	2329	2325	2311	2294	2285	0	0%
1961	2342	2339	2326	2310	2303	0	0%
1962	2340	2334	2320	2304	2294	0	0%
1963	2368	2369	2358	2351	2339	0	0%
1964	2323	2313	2297	2279	2272	0	0%
1965	2364	2357	2348	2342	2336	0	0%
1966	2364	2356	2344	2330	2319	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2346	2336	2321	2305	2294	0	0%
1969	2368	2369	2358	2351	2339	0	0%
1970	2342	2334	2320	2308	2300	0	0%
1971	2368	2369	2358	2351	2339	0	0%
1972	2354	2347	2333	2318	2307	0	0%
1973	2368	2362	2349	2343	2336	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2339	2328	2313	2297	2289	0	0%
1977	2249	2226	2201	2185	2176	0	0%
1978	2340	2349	2343	2337	2332	0	0%
1979	2368	2359	2346	2331	2322	0	0%
1980	2366	2360	2352	2345	2339	0	0%
1981	2353	2341	2327	2310	2302	0	0%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2367	2362	2350	2344	2338	0	0%
1985	2338	2327	2311	2293	2285	0	0%
1986	2355	2347	2334	2318	2313	0	0%
1987	2334	2322	2306	2289	2279	0	0%
1988	2313	2306	2290	2270	2260	0	0%
1989	2324	2312	2302	2285	2277	0	0%
1990	2305	2300	2282	2261	2252	0	0%
1991	2245	2236	2221	2188	2176	0	0%

Percent Availability During Recreation Season

1 0%
 100%

TRINITY RESERVOIR

Trinity Elevation (ft) Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2345	2335	2328	2320	0	0%
1923	2332	2320	2304	2287	2281	0	0%
1924	2251	2248	2240	2229	2220	0	0%
1925	2312	2311	2304	2286	2280	0	0%
1926	2300	2280	2259	2234	2229	0	0%
1927	2333	2340	2329	2322	2314	0	0%
1928	2343	2328	2312	2295	2278	0	0%
1929	2288	2284	2277	2256	2258	0	0%
1930	2284	2279	2271	2263	2255	0	0%
1931	2261	2254	2247	2221	2212	0	0%
1932	2241	2224	2215	2211	2206	0	0%
1933	2242	2249	2244	2232	2220	0	0%
1934	2262	2254	2247	2221	2212	0	0%
1935	2279	2277	2270	2261	2247	0	0%
1936	2277	2277	2270	2262	2254	0	0%
1937	2282	2286	2281	2274	2255	0	0%
1938	2354	2358	2352	2345	2339	0	0%
1939	2304	2288	2268	2245	2240	0	0%
1940	2325	2311	2303	2285	2276	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2363	2369	2358	2351	2339	0	0%
1943	2356	2351	2346	2339	2329	0	0%
1944	2324	2313	2298	2279	2271	0	0%
1945	2312	2314	2307	2290	2277	0	0%
1946	2324	2311	2304	2287	2277	0	0%
1947	2280	2272	2251	2226	2220	0	0%
1948	2282	2296	2293	2288	2283	0	0%
1949	2324	2318	2302	2284	2279	0	0%
1950	2310	2303	2294	2276	2270	0	0%
1951	2351	2338	2322	2307	2302	0	0%
1952	2365	2369	2358	2351	2339	0	0%
1953	2358	2368	2358	2351	2339	0	0%
1954	2357	2344	2330	2316	2310	0	0%
1955	2315	2303	2294	2276	2270	0	0%
1956	2360	2363	2356	2350	2339	0	0%
1957	2345	2345	2332	2325	2321	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2327	2313	2306	2289	2282	0	0%
1960	2294	2299	2293	2285	2280	0	0%
1961	2325	2319	2311	2294	2288	0	0%
1962	2316	2311	2304	2287	2280	0	0%
1963	2359	2355	2349	2342	2337	0	0%
1964	2304	2290	2271	2250	2246	0	0%
1965	2335	2334	2319	2313	2309	0	0%
1966	2347	2335	2321	2306	2297	0	0%
1967	2347	2358	2355	2350	2339	0	0%
1968	2337	2324	2311	2294	2285	0	0%
1969	2358	2366	2358	2351	2339	0	0%
1970	2330	2316	2309	2291	2282	0	0%
1971	2347	2353	2349	2343	2337	0	0%
1972	2348	2337	2323	2307	2297	0	0%
1973	2347	2343	2329	2320	2315	0	0%
1974	2367	2369	2358	2351	2339	0	0%
1975	2357	2369	2358	2351	2339	0	0%
1976	2337	2329	2315	2305	2299	0	0%
1977	2252	2228	2212	2208	2206	0	0%
1978	2325	2331	2325	2317	2315	0	0%
1979	2329	2327	2312	2295	2284	0	0%
1980	2352	2343	2338	2331	2325	0	0%
1981	2346	2332	2317	2300	2291	0	0%
1982	2360	2358	2352	2345	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2352	2345	2333	2327	2322	0	0%
1985	2317	2302	2284	2264	2257	0	0%
1986	2324	2311	2303	2285	2280	0	0%
1987	2296	2279	2258	2233	2227	0	0%
1988	2274	2275	2269	2260	2253	0	0%
1989	2305	2301	2294	2285	2279	0	0%
1990	2294	2290	2283	2262	2252	0	0%
1991	2238	2237	2230	2221	2213	0	0%

Percent Availability During Recreation Season

0%
100%

TRINITY RESERVOIR

Trinity Elevation (ft)
Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2330	2329	2324	2321	2318	0	0%
1923	2338	2334	2331	2327	2324	0	0%
1924	2327	2318	2314	2309	2306	0	0%
1925	2337	2334	2328	2325	2324	0	0%
1926	2321	2313	2307	2303	2301	0	0%
1927	2337	2338	2334	2331	2329	0	0%
1928	2323	2318	2312	2309	2307	0	0%
1929	2303	2297	2293	2289	2285	0	0%
1930	2305	2298	2292	2288	2285	0	0%
1931	2288	2280	2275	2270	2266	0	0%
1932	2275	2271	2264	2259	2256	0	0%
1933	2249	2256	2251	2247	2244	0	0%
1934	2278	2269	2263	2257	2254	0	0%
1935	2288	2283	2277	2273	2270	0	0%
1936	2277	2275	2269	2266	2263	0	0%
1937	2260	2264	2260	2256	2253	0	0%
1938	2277	2277	2272	2270	2268	0	0%
1939	2268	2258	2252	2246	2242	0	0%
1940	2301	2294	2286	2282	2280	0	0%
1941	2302	2311	2315	2315	2315	0	0%
1942	2330	2334	2331	2328	2327	0	0%
1943	2324	2320	2315	2312	2310	0	0%
1944	2313	2310	2307	2303	2300	0	0%
1945	2317	2314	2309	2306	2304	0	0%
1946	2310	2304	2299	2295	2293	0	0%
1947	2275	2271	2265	2261	2258	0	0%
1948	2270	2279	2274	2272	2270	0	0%
1949	2267	2264	2257	2254	2251	0	0%
1950	2242	2237	2230	2225	2221	0	0%
1951	2278	2269	2260	2256	2253	0	0%
1952	2286	2289	2287	2284	2282	0	0%
1953	2285	2293	2293	2290	2289	0	0%
1954	2310	2303	2297	2295	2293	0	0%
1955	2275	2271	2265	2261	2259	0	0%
1956	2276	2274	2269	2267	2266	0	0%
1957	2254	2253	2246	2242	2240	0	0%
1958	2293	2299	2298	2298	2297	0	0%
1959	2287	2283	2277	2273	2272	0	0%
1960	2255	2258	2252	2248	2245	0	0%
1961	2250	2256	2250	2246	2244	0	0%
1962	2248	2248	2241	2238	2235	0	0%
1963	2289	2283	2276	2271	2269	0	0%
1964	2251	2245	2238	2234	2232	0	0%
1965	2292	2285	2279	2276	2275	0	0%
1966	2296	2293	2288	2286	2285	0	0%
1967	2299	2307	2304	2301	2300	0	0%
1968	2300	2295	2290	2287	2285	0	0%
1969	2317	2320	2316	2313	2311	0	0%
1970	2311	2305	2298	2294	2292	0	0%
1971	2319	2319	2316	2313	2310	0	0%
1972	2318	2316	2311	2309	2307	0	0%
1973	2317	2312	2306	2302	2301	0	0%
1974	2300	2305	2302	2301	2300	0	0%
1975	2289	2299	2295	2292	2291	0	0%
1976	2274	2266	2260	2257	2254	0	0%
1977	2238	2226	2218	2211	2208	0	0%
1978	2247	2248	2246	2244	2246	0	0%
1979	2239	2232	2225	2219	2216	0	0%
1980	2261	2254	2248	2243	2240	0	0%
1981	2241	2230	2221	2215	2210	0	0%
1982	2240	2230	2224	2221	2219	0	0%
1983	2268	2296	2308	2311	2312	0	0%
1984	2310	2305	2299	2296	2294	0	0%
1985	2290	2283	2277	2273	2270	0	0%
1986	2312	2305	2298	2294	2293	0	0%
1987	2293	2286	2279	2276	2272	0	0%
1988	2289	2287	2282	2278	2274	0	0%
1989	2289	2283	2277	2273	2271	0	0%
1990	2247	2241	2233	2228	2224	0	0%
1991	2185	2173	2160	2152	2146	3	60%

Percent Availability During Recreation Season

3 1%
99%

TRINITY RESERVOIR

Trinity Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2339	2342	2329	2320	2307	0	0%
1923	2328	2317	2300	2279	2268	0	0%
1924	2248	2241	2227	2221	2215	0	0%
1925	2302	2296	2284	2275	2264	0	0%
1926	2296	2290	2280	2268	2255	0	0%
1927	2344	2344	2333	2325	2312	0	0%
1928	2348	2329	2311	2292	2271	0	0%
1929	2278	2272	2262	2235	2220	0	0%
1930	2264	2262	2253	2241	2226	0	0%
1931	2232	2229	2224	2218	2212	0	0%
1932	2244	2238	2226	2221	2215	0	0%
1933	2238	2252	2243	2231	2216	0	0%
1934	2258	2254	2242	2229	2213	0	0%
1935	2271	2268	2260	2249	2233	0	0%
1936	2272	2265	2253	2242	2228	0	0%
1937	2269	2273	2267	2255	2230	0	0%
1938	2347	2343	2335	2327	2319	0	0%
1939	2328	2314	2296	2275	2263	0	0%
1940	2339	2331	2320	2302	2286	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2362	2366	2358	2351	2337	0	0%
1943	2351	2346	2334	2326	2312	0	0%
1944	2326	2325	2313	2296	2283	0	0%
1945	2318	2315	2303	2291	2281	0	0%
1946	2339	2325	2311	2292	2277	0	0%
1947	2294	2293	2283	2272	2260	0	0%
1948	2302	2309	2299	2289	2279	0	0%
1949	2319	2317	2305	2296	2283	0	0%
1950	2309	2308	2292	2270	2259	0	0%
1951	2341	2333	2323	2305	2296	0	0%
1952	2365	2368	2358	2351	2339	0	0%
1953	2356	2362	2358	2351	2339	0	0%
1954	2353	2335	2326	2309	2299	0	0%
1955	2308	2308	2298	2288	2275	0	0%
1956	2365	2360	2353	2345	2338	0	0%
1957	2346	2344	2330	2322	2313	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2342	2327	2311	2292	2279	0	0%
1960	2303	2301	2289	2280	2269	0	0%
1961	2317	2317	2305	2296	2283	0	0%
1962	2319	2320	2311	2293	2282	0	0%
1963	2358	2352	2342	2334	2325	0	0%
1964	2327	2321	2305	2289	2277	0	0%
1965	2352	2341	2329	2322	2314	0	0%
1966	2358	2344	2327	2311	2297	0	0%
1967	2353	2360	2353	2347	2339	0	0%
1968	2344	2331	2312	2293	2283	0	0%
1969	2360	2364	2356	2349	2339	0	0%
1970	2332	2325	2314	2301	2287	0	0%
1971	2354	2356	2349	2341	2333	0	0%
1972	2351	2340	2321	2304	2289	0	0%
1973	2349	2341	2326	2317	2309	0	0%
1974	2365	2365	2358	2351	2339	0	0%
1975	2361	2369	2358	2351	2339	0	0%
1976	2336	2330	2317	2307	2295	0	0%
1977	2272	2251	2226	2221	2217	0	0%
1978	2335	2332	2326	2318	2311	0	0%
1979	2339	2340	2324	2308	2299	0	0%
1980	2350	2340	2331	2322	2314	0	0%
1981	2343	2338	2321	2305	2295	0	0%
1982	2359	2351	2343	2336	2327	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2351	2342	2327	2319	2311	0	0%
1985	2335	2321	2304	2289	2276	0	0%
1986	2340	2333	2317	2301	2289	0	0%
1987	2314	2307	2290	2271	2259	0	0%
1988	2295	2295	2286	2265	2252	0	0%
1989	2299	2288	2274	2263	2252	0	0%
1990	2270	2269	2257	2245	2231	0	0%
1991	2220	2219	2214	2209	2203	0	0%

Percent Availability During Recreation Season 100%

TRINITY RESERVOIR

Trinity Elevation (ft)
Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Minersville Ramp threshold of 2170 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	2344	2346	2334	2328	2323	0	0%
1923	2329	2316	2298	2278	2274	0	0%
1924	2227	2219	2210	2192	2185	0	0%
1925	2300	2301	2290	2285	2280	0	0%
1926	2308	2290	2269	2243	2238	0	0%
1927	2343	2349	2339	2333	2328	0	0%
1928	2358	2345	2330	2312	2303	0	0%
1929	2291	2279	2265	2250	2244	0	0%
1930	2284	2276	2261	2255	2250	0	0%
1931	2241	2226	2216	2190	2183	0	0%
1932	2230	2208	2184	2179	2173	0	0%
1933	2224	2228	2220	2196	2185	0	0%
1934	2238	2221	2210	2185	2179	0	0%
1935	2257	2250	2233	2228	2219	0	0%
1936	2262	2259	2248	2242	2238	0	0%
1937	2275	2276	2264	2258	2252	0	0%
1938	2368	2369	2358	2351	2339	0	0%
1939	2316	2300	2279	2255	2251	0	0%
1940	2325	2317	2306	2286	2282	0	0%
1941	2368	2369	2358	2351	2339	0	0%
1942	2368	2369	2358	2351	2339	0	0%
1943	2360	2355	2345	2339	2332	0	0%
1944	2326	2314	2297	2276	2272	0	0%
1945	2311	2314	2304	2285	2278	0	0%
1946	2335	2326	2311	2292	2287	0	0%
1947	2301	2293	2272	2248	2237	0	0%
1948	2289	2304	2294	2290	2287	0	0%
1949	2332	2328	2312	2294	2290	0	0%
1950	2312	2308	2294	2276	2272	0	0%
1951	2357	2347	2332	2317	2314	0	0%
1952	2368	2369	2358	2351	2339	0	0%
1953	2366	2369	2358	2351	2339	0	0%
1954	2359	2350	2336	2320	2318	0	0%
1955	2325	2313	2295	2276	2272	0	0%
1956	2368	2369	2358	2351	2339	0	0%
1957	2355	2354	2343	2338	2334	0	0%
1958	2368	2369	2358	2351	2339	0	0%
1959	2339	2328	2311	2292	2289	0	0%
1960	2317	2313	2302	2285	2277	0	0%
1961	2333	2328	2313	2294	2291	0	0%
1962	2320	2315	2305	2286	2281	0	0%
1963	2368	2369	2358	2351	2339	0	0%
1964	2314	2301	2283	2261	2258	0	0%
1965	2343	2342	2332	2326	2323	0	0%
1966	2359	2348	2335	2319	2312	0	0%
1967	2368	2369	2358	2351	2339	0	0%
1968	2342	2330	2314	2295	2287	0	0%
1969	2368	2369	2358	2351	2339	0	0%
1970	2337	2327	2311	2299	2295	0	0%
1971	2368	2369	2358	2351	2339	0	0%
1972	2352	2342	2327	2310	2301	0	0%
1973	2361	2354	2340	2334	2331	0	0%
1974	2368	2369	2358	2351	2339	0	0%
1975	2368	2369	2358	2351	2339	0	0%
1976	2333	2319	2302	2283	2280	0	0%
1977	2230	2200	2184	2179	2176	0	0%
1978	2332	2345	2338	2332	2331	0	0%
1979	2356	2345	2330	2320	2317	0	0%
1980	2361	2354	2344	2338	2335	0	0%
1981	2347	2334	2317	2298	2294	0	0%
1982	2368	2369	2358	2351	2339	0	0%
1983	2368	2369	2358	2351	2339	0	0%
1984	2362	2355	2344	2339	2336	0	0%
1985	2333	2320	2302	2282	2278	0	0%
1986	2343	2333	2317	2299	2296	0	0%
1987	2318	2302	2283	2260	2255	0	0%
1988	2280	2272	2258	2248	2241	0	0%
1989	2300	2296	2283	2278	2274	0	0%
1990	2291	2281	2267	2255	2249	0	0%
1991	2236	2222	2216	2205	2198	0	0%
						0	0%
						100%	

Percent Availability During Recreation Season

**SHASTA RESERVOIR
DATA**

C - 0 9 2 7 6 5

C-092765

Shasta Reservoir 952 msl Recreation Activity Threshold

SHASTA RESERVOIR

Shasta Elevation (ft)

No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1044	1036	1022	1006	999	0	0%
1924	977	959	933	915	907	3	60%
1925	1051	1042	1020	997	988	0	0%
1926	1042	1026	1006	993	984	0	0%
1927	1066	1060	1044	1023	1017	0	0%
1928	1062	1051	1026	1003	995	0	0%
1929	1010	1006	986	960	951	1	20%
1930	1034	1021	1005	983	974	0	0%
1931	970	959	929	908	898	3	60%
1932	972	971	956	929	919	2	40%
1933	959	956	936	917	907	3	60%
1934	957	945	924	902	886	4	80%
1935	1024	1009	980	949	935	2	40%
1936	1027	1018	992	961	950	1	20%
1937	1013	1005	981	950	933	2	40%
1938	1066	1061	1045	1023	1023	0	0%
1939	1036	1024	1009	994	985	0	0%
1940	1057	1048	1032	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1046	1039	1023	1006	999	0	0%
1945	1062	1051	1032	1014	1007	0	0%
1946	1053	1044	1026	1009	1002	0	0%
1947	1036	1033	1014	1000	992	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1061	1047	1029	1011	1003	0	0%
1950	1053	1041	1021	999	991	0	0%
1951	1066	1057	1039	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1062	1055	1033	1021	1016	0	0%
1955	1052	1038	1020	1006	1000	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1054	1044	1019	1004	1000	0	0%
1960	1054	1041	1018	1000	993	0	0%
1961	1053	1041	1021	1004	997	0	0%
1962	1056	1047	1025	1010	1003	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1037	1031	1010	998	989	0	0%
1965	1064	1057	1044	1023	1017	0	0%
1966	1061	1052	1032	1020	1014	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1048	1025	1019	1014	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1055	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1052	1028	1017	1012	0	0%
1973	1066	1060	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1035	1022	997	984	978	0	0%
1977	946	937	915	898	896	5	100%
1978	1066	1056	1044	1023	1019	0	0%
1979	1066	1055	1035	1023	1016	0	0%
1980	1065	1060	1044	1023	1018	0	0%
1981	1058	1040	1019	1004	996	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1040	1024	1004	992	986	0	0%
1986	1049	1040	1027	1014	1009	0	0%
1987	1041	1017	996	983	976	0	0%
1988	1021	1008	983	962	955	0	0%
1989	1046	1031	1006	987	980	0	0%
1990	1002	999	971	956	953	0	0%
1991	964	954	934	917	911	3	60%

Percent Availability During Recreation Season

29 8%
92%

SHASTA RESERVOIR

Shasta Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1060	1044	1023	1019	0	0%
1923	1044	1036	1022	1006	1002	0	0%
1924	979	964	942	920	914	3	60%
1925	1046	1041	1015	998	993	0	0%
1926	1043	1028	1000	986	980	0	0%
1927	1066	1061	1044	1023	1022	0	0%
1928	1063	1052	1027	1006	1002	0	0%
1929	1013	1001	974	956	952	1	20%
1930	1033	1019	997	976	971	0	0%
1931	963	952	928	910	905	4	80%
1932	981	978	963	938	927	2	40%
1933	956	953	930	911	907	3	60%
1934	953	936	916	899	887	4	80%
1935	1024	1008	983	955	946	1	20%
1936	1033	1025	998	969	961	0	0%
1937	1025	1016	996	969	962	0	0%
1938	1066	1061	1046	1024	1023	0	0%
1939	1034	1020	996	978	972	0	0%
1940	1060	1051	1036	1019	1015	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1061	1044	1023	1021	0	0%
1944	1049	1042	1023	1005	1001	0	0%
1945	1062	1052	1036	1020	1016	0	0%
1946	1057	1048	1033	1018	1014	0	0%
1947	1041	1036	1013	997	991	0	0%
1948	1066	1061	1044	1023	1019	0	0%
1949	1063	1049	1031	1014	1010	0	0%
1950	1059	1049	1034	1016	1011	0	0%
1951	1066	1057	1038	1023	1019	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1063	1055	1033	1022	1020	0	0%
1955	1054	1040	1021	1009	1006	0	0%
1956	1066	1061	1045	1024	1023	0	0%
1957	1066	1061	1044	1023	1022	0	0%
1958	1066	1061	1047	1029	1023	0	0%
1959	1054	1045	1020	1005	1005	0	0%
1960	1058	1045	1024	1009	1006	0	0%
1961	1054	1042	1018	1006	1002	0	0%
1962	1056	1049	1031	1016	1012	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1029	1000	986	980	0	0%
1965	1065	1060	1044	1023	1020	0	0%
1966	1061	1051	1032	1018	1015	0	0%
1967	1067	1061	1046	1026	1023	0	0%
1968	1058	1049	1028	1021	1019	0	0%
1969	1066	1061	1045	1024	1023	0	0%
1970	1056	1052	1037	1023	1020	0	0%
1971	1066	1061	1046	1024	1023	0	0%
1972	1061	1053	1030	1019	1017	0	0%
1973	1066	1058	1041	1023	1020	0	0%
1974	1066	1061	1047	1028	1023	0	0%
1975	1067	1061	1045	1025	1023	0	0%
1976	1034	1018	990	979	977	0	0%
1977	949	939	923	912	915	5	100%
1978	1066	1059	1044	1023	1021	0	0%
1979	1066	1054	1035	1023	1019	0	0%
1980	1066	1061	1044	1023	1021	0	0%
1981	1059	1042	1020	1005	1001	0	0%
1982	1066	1061	1045	1024	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1066	1061	1044	1023	1021	0	0%
1985	1040	1021	994	980	977	0	0%
1986	1049	1040	1027	1014	1012	0	0%
1987	1045	1022	997	981	978	0	0%
1988	1024	1009	982	966	961	0	0%
1989	1047	1033	1004	991	988	0	0%
1990	1010	1000	972	958	952	1	20%
1991	965	950	920	908	903	4	80%

SHASTA RESERVOIR

Shasta Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1044	1023	1018	0	0%
1923	1044	1036	1022	1006	1001	0	0%
1924	977	956	931	910	904	3	60%
1925	1048	1039	1015	1000	994	0	0%
1926	1041	1025	1008	996	988	0	0%
1927	1066	1056	1044	1023	1018	0	0%
1928	1060	1048	1022	999	994	0	0%
1929	999	989	967	952	950	2	40%
1930	1031	1016	997	976	971	0	0%
1931	963	949	918	902	895	4	80%
1932	976	973	955	930	921	2	40%
1933	960	954	933	910	905	3	60%
1934	958	940	914	899	886	4	80%
1935	1022	1003	976	947	936	2	40%
1936	1027	1015	989	960	952	1	20%
1937	1014	1004	977	948	942	2	40%
1938	1066	1061	1044	1023	1020	0	0%
1939	1037	1026	1011	996	989	0	0%
1940	1055	1046	1026	1008	1003	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1060	1044	1023	1020	0	0%
1944	1047	1040	1023	1005	1000	0	0%
1945	1061	1050	1030	1012	1008	0	0%
1946	1050	1041	1019	1003	999	0	0%
1947	1031	1028	1009	995	988	0	0%
1948	1066	1061	1044	1023	1018	0	0%
1949	1060	1044	1025	1008	1002	0	0%
1950	1047	1035	1012	992	986	0	0%
1951	1065	1055	1037	1023	1018	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1062	1054	1032	1020	1017	0	0%
1955	1047	1034	1014	1001	997	0	0%
1956	1066	1061	1044	1023	1023	0	0%
1957	1065	1058	1044	1023	1021	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1051	1041	1011	996	994	0	0%
1960	1053	1038	1014	995	990	0	0%
1961	1052	1040	1016	998	993	0	0%
1962	1055	1045	1021	1007	1002	0	0%
1963	1066	1061	1044	1023	1020	0	0%
1964	1039	1032	1014	1003	997	0	0%
1965	1064	1053	1043	1023	1019	0	0%
1966	1058	1049	1027	1013	1009	0	0%
1967	1066	1061	1044	1023	1023	0	0%
1968	1055	1046	1022	1016	1012	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1052	1047	1028	1016	1013	0	0%
1971	1066	1061	1044	1023	1020	0	0%
1972	1058	1051	1026	1015	1012	0	0%
1973	1066	1057	1040	1023	1019	0	0%
1974	1066	1061	1046	1027	1023	0	0%
1975	1066	1061	1045	1025	1023	0	0%
1976	1029	1012	986	971	968	0	0%
1977	939	930	910	894	894	5	100%
1978	1066	1056	1044	1023	1020	0	0%
1979	1066	1051	1029	1020	1016	0	0%
1980	1062	1057	1044	1023	1020	0	0%
1981	1056	1039	1018	1003	998	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1058	1044	1023	1020	0	0%
1985	1041	1025	1007	996	992	0	0%
1986	1048	1038	1021	1007	1005	0	0%
1987	1036	1014	997	986	980	0	0%
1988	1023	1006	979	958	952	1	20%
1989	1044	1026	1000	982	979	0	0%
1990	1000	992	964	952	952	2	40%
1991	969	952	933	912	908	4	80%

35 10%
Percent Availability During Recreation Season 90%

SHASTA RESERVOIR

Shasta Elevation (ft) Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1039	1019	1011	0	0%
1923	1039	1027	1006	982	973	0	0%
1924	945	919	883	847	829	0	0%
1925	1026	1018	998	976	967	5	100%
1926	1030	1013	992	971	961	0	0%
1927	1066	1056	1038	1016	1006	0	0%
1928	1062	1047	1029	1006	998	0	0%
1929	1012	1002	979	956	946	0	0%
1930	1029	1012	991	969	959	1	20%
1931	945	922	886	841	819	0	0%
1932	935	924	899	862	849	5	100%
1933	920	909	878	838	814	5	100%
1934	908	881	840	766	693	5	100%
1935	982	966	940	906	893	5	100%
1936	1014	1006	983	958	947	3	60%
1937	1023	1016	994	969	958	1	20%
1938	1066	1061	1044	1023	1016	0	0%
1939	1029	1010	987	963	953	0	0%
1940	1055	1041	1018	992	983	0	0%
1941	1066	1061	1044	1023	1013	0	0%
1942	1066	1061	1044	1023	1014	0	0%
1943	1066	1057	1039	1017	1007	0	0%
1944	1039	1029	1008	984	975	0	0%
1945	1063	1053	1032	1008	999	0	0%
1946	1054	1041	1023	1001	993	0	0%
1947	1034	1030	1010	989	980	0	0%
1948	1066	1061	1043	1021	1014	0	0%
1949	1066	1053	1035	1016	1007	0	0%
1950	1060	1047	1027	1003	994	0	0%
1951	1066	1052	1031	1008	1000	0	0%
1952	1066	1061	1044	1023	1017	0	0%
1953	1066	1061	1044	1023	1017	0	0%
1954	1061	1050	1031	1013	1007	0	0%
1955	1055	1046	1033	1019	1012	0	0%
1956	1066	1061	1044	1023	1017	0	0%
1957	1066	1058	1043	1023	1018	0	0%
1958	1066	1061	1044	1023	1018	0	0%
1959	1054	1042	1022	1001	996	0	0%
1960	1066	1057	1043	1023	1016	0	0%
1961	1066	1060	1044	1023	1015	0	0%
1962	1064	1055	1034	1012	1004	0	0%
1963	1066	1058	1042	1023	1017	0	0%
1964	1029	1020	1003	984	975	0	0%
1965	1063	1052	1035	1019	1012	0	0%
1966	1062	1049	1033	1013	1006	0	0%
1967	1066	1061	1044	1023	1017	0	0%
1968	1056	1043	1022	1009	1003	0	0%
1969	1066	1061	1044	1023	1018	0	0%
1970	1041	1030	1002	978	969	0	0%
1971	1066	1061	1044	1023	1017	0	0%
1972	1061	1050	1025	1007	1002	0	0%
1973	1065	1053	1036	1019	1012	0	0%
1974	1066	1061	1044	1023	1019	0	0%
1975	1066	1061	1044	1023	1018	0	0%
1976	1030	1016	993	978	971	0	0%
1977	906	875	829	787	781	0	0%
1978	1066	1056	1040	1021	1016	5	100%
1979	1066	1052	1036	1023	1015	0	0%
1980	1062	1052	1037	1021	1015	0	0%
1981	1058	1045	1030	1013	1005	0	0%
1982	1063	1060	1044	1023	1017	0	0%
1983	1066	1061	1044	1023	1020	0	0%
1984	1063	1052	1034	1019	1013	0	0%
1985	1038	1024	1007	990	983	0	0%
1986	1041	1023	999	973	967	0	0%
1987	1012	992	970	953	949	0	0%
1988	1009	991	966	946	938	1	20%
1989	1040	1030	1012	995	988	2	40%
1990	1028	1022	996	975	966	0	0%
1991	974	964	951	934	925	0	0%

38 11%
Percent Availability During Recreation Season 89%

SHASTA RESERVOIR

Shasta Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1056	1044	1023	1019	0	0%
1923	1038	1028	1012	996	991	0	0%
1924	960	939	913	884	872	4	80%
1925	1041	1031	1010	989	984	0	0%
1926	1034	1017	999	980	975	0	0%
1927	1066	1057	1044	1023	1019	0	0%
1928	1060	1048	1024	1002	997	0	0%
1929	1003	995	974	956	951	1	20%
1930	1029	1012	992	972	967	0	0%
1931	957	938	904	864	851	4	80%
1932	953	949	929	905	895	4	80%
1933	956	948	929	907	903	4	80%
1934	961	945	919	896	888	4	80%
1935	1023	1004	976	947	936	2	40%
1936	1025	1013	987	958	951	1	20%
1937	1014	1005	977	950	943	2	40%
1938	1066	1061	1044	1023	1020	0	0%
1939	1029	1015	998	978	973	0	0%
1940	1056	1042	1021	1003	1001	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1044	1023	1023	0	0%
1943	1066	1058	1044	1023	1020	0	0%
1944	1043	1033	1014	998	993	0	0%
1945	1061	1050	1030	1008	1001	0	0%
1946	1044	1034	1013	996	994	0	0%
1947	1030	1023	1002	981	977	0	0%
1948	1066	1061	1044	1023	1020	0	0%
1949	1062	1044	1024	1001	998	0	0%
1950	1045	1030	1009	989	984	0	0%
1951	1065	1049	1030	1013	1009	0	0%
1952	1066	1061	1044	1023	1023	0	0%
1953	1066	1061	1044	1023	1023	0	0%
1954	1060	1052	1025	1011	1010	0	0%
1955	1047	1031	1015	1001	999	0	0%
1956	1066	1061	1044	1023	1021	0	0%
1957	1066	1057	1044	1023	1022	0	0%
1958	1066	1061	1047	1027	1023	0	0%
1959	1046	1035	1006	990	991	0	0%
1960	1050	1035	1017	998	994	0	0%
1961	1054	1040	1019	1002	1000	0	0%
1962	1055	1042	1021	1006	1001	0	0%
1963	1066	1060	1044	1023	1021	0	0%
1964	1030	1022	1007	992	989	0	0%
1965	1064	1056	1044	1023	1020	0	0%
1966	1058	1047	1029	1014	1011	0	0%
1967	1066	1061	1044	1023	1022	0	0%
1968	1049	1038	1015	1008	1003	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1050	1040	1019	1005	1003	0	0%
1971	1066	1061	1044	1023	1021	0	0%
1972	1053	1044	1018	1006	1005	0	0%
1973	1066	1056	1041	1023	1020	0	0%
1974	1066	1061	1044	1023	1023	0	0%
1975	1066	1061	1044	1023	1023	0	0%
1976	1034	1018	992	978	977	0	0%
1977	927	917	902	881	879	5	100%
1978	1066	1056	1043	1023	1021	0	0%
1979	1066	1049	1031	1021	1014	0	0%
1980	1064	1056	1044	1023	1021	0	0%
1981	1056	1038	1023	1007	1003	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1056	1044	1023	1021	0	0%
1985	1035	1020	1006	991	991	0	0%
1986	1046	1032	1015	1000	1001	0	0%
1987	1034	1010	993	975	972	0	0%
1988	1018	1002	973	957	953	0	0%
1989	1043	1028	1012	998	995	0	0%
1990	1025	1018	986	964	960	0	0%
1991	970	960	944	925	917	3	60%

34

10%
Percent Availability During Recreation Season
90%

SHASTA RESERVOIR

Shasta Elevation (ft)
Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the McCloud Arm Ramps threshold of 952 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1039	1032	1017	1002	994	0	0%
1924	978	961	935	917	910	3	60%
1925	1045	1038	1017	994	986	0	0%
1926	1040	1026	1003	990	981	0	0%
1927	1066	1059	1044	1023	1017	0	0%
1928	1062	1052	1029	1010	1002	0	0%
1929	1014	1009	985	961	953	0	0%
1930	1034	1022	1006	986	977	0	0%
1931	972	961	934	915	908	3	60%
1932	976	974	959	932	921	2	40%
1933	959	957	938	920	912	3	60%
1934	966	952	930	912	902	4	80%
1935	1030	1015	994	964	955	0	0%
1936	1037	1030	1007	979	968	0	0%
1937	1029	1022	1001	971	960	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1037	1027	1009	995	986	0	0%
1940	1057	1048	1031	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1047	1041	1027	1010	1003	0	0%
1945	1062	1052	1034	1017	1011	0	0%
1946	1054	1046	1031	1016	1009	0	0%
1947	1038	1035	1014	997	989	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1063	1048	1032	1016	1008	0	0%
1950	1058	1045	1028	1009	1002	0	0%
1951	1066	1057	1041	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1063	1056	1036	1023	1018	0	0%
1955	1054	1042	1025	1010	1004	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1055	1044	1020	1004	1001	0	0%
1960	1053	1042	1019	1000	992	0	0%
1961	1052	1040	1020	1007	1001	0	0%
1962	1056	1047	1029	1015	1008	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1034	1010	995	986	0	0%
1965	1064	1056	1044	1023	1017	0	0%
1966	1062	1052	1034	1023	1016	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1047	1025	1019	1013	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1054	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1051	1029	1016	1011	0	0%
1973	1066	1061	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1034	1021	1001	988	982	0	0%
1977	947	939	918	902	900	5	100%
1978	1066	1057	1044	1023	1019	0	0%
1979	1066	1055	1039	1023	1016	0	0%
1980	1065	1061	1044	1023	1018	0	0%
1981	1057	1040	1018	1002	994	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1041	1025	1004	988	982	0	0%
1986	1049	1040	1029	1017	1012	0	0%
1987	1043	1022	1000	984	976	0	0%
1988	1018	1006	982	960	953	0	0%
1989	1047	1034	1011	992	985	0	0%
1990	1010	1008	985	965	958	0	0%
1991	972	964	946	926	920	3	60%

23 7%
Percent Availability During Recreation Season 93%

Shasta Reservoir 950 msl Recreation Activity Threshold

SHASTA RESERVOIR

Shasta Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1044	1036	1022	1006	999	0	0%
1924	977	959	933	915	907	3	60%
1925	1051	1042	1020	997	988	0	0%
1926	1042	1026	1006	993	984	0	0%
1927	1066	1060	1044	1023	1017	0	0%
1928	1062	1051	1026	1003	995	0	0%
1929	1010	1006	986	960	951	0	0%
1930	1034	1021	1005	983	974	0	0%
1931	970	959	929	908	898	3	60%
1932	972	971	956	929	919	2	40%
1933	959	956	936	917	907	3	60%
1934	957	945	924	902	886	4	80%
1935	1024	1009	980	949	935	2	40%
1936	1027	1018	992	961	950	1	20%
1937	1013	1005	981	950	933	2	40%
1938	1066	1061	1045	1023	1023	0	0%
1939	1036	1024	1009	994	985	0	0%
1940	1057	1048	1032	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1046	1039	1023	1006	999	0	0%
1945	1062	1051	1032	1014	1007	0	0%
1946	1053	1044	1026	1009	1002	0	0%
1947	1036	1033	1014	1000	992	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1061	1047	1029	1011	1003	0	0%
1950	1053	1041	1021	999	991	0	0%
1951	1066	1057	1039	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1062	1055	1033	1021	1016	0	0%
1955	1052	1038	1020	1006	1000	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1054	1044	1019	1004	1000	0	0%
1960	1054	1041	1018	1000	993	0	0%
1961	1053	1041	1021	1004	997	0	0%
1962	1056	1047	1025	1010	1003	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1037	1031	1010	998	989	0	0%
1965	1064	1057	1044	1023	1017	0	0%
1966	1061	1052	1032	1020	1014	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1048	1025	1019	1014	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1055	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1052	1028	1017	1012	0	0%
1973	1066	1060	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1035	1022	997	984	978	0	0%
1977	946	937	915	898	896	5	100%
1978	1066	1056	1044	1023	1019	0	0%
1979	1066	1055	1035	1023	1016	0	0%
1980	1065	1060	1044	1023	1018	0	0%
1981	1058	1040	1019	1004	996	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1040	1024	1004	992	986	0	0%
1986	1049	1040	1027	1014	1009	0	0%
1987	1041	1017	996	983	976	0	0%
1988	1021	1008	983	962	955	0	0%
1989	1046	1031	1006	987	980	0	0%
1990	1002	999	971	956	953	0	0%
1991	964	954	934	917	911	3	60%

Percent Availability During Recreation Season

28 8%
 92%

SHASTA RESERVOIR

Shasta Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1060	1044	1023	1019	0	0%
1923	1044	1036	1022	1006	1002	3	60%
1924	979	964	942	920	914	3	60%
1925	1046	1041	1015	998	993	0	0%
1926	1043	1028	1000	986	980	0	0%
1927	1066	1061	1044	1023	1022	0	0%
1928	1063	1052	1027	1006	1002	0	0%
1929	1013	1001	974	956	952	0	0%
1930	1033	1019	997	976	971	0	0%
1931	963	952	928	910	905	3	60%
1932	981	978	963	938	927	2	40%
1933	956	953	930	911	907	3	60%
1934	953	936	916	899	887	4	80%
1935	1024	1008	983	955	946	1	20%
1936	1033	1025	998	969	961	0	0%
1937	1025	1016	996	969	962	0	0%
1938	1066	1061	1046	1024	1023	0	0%
1939	1034	1020	996	978	972	0	0%
1940	1060	1051	1036	1019	1015	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1061	1044	1023	1021	0	0%
1944	1049	1042	1023	1005	1001	0	0%
1945	1062	1052	1036	1020	1016	0	0%
1946	1057	1048	1033	1018	1014	0	0%
1947	1041	1036	1013	997	991	0	0%
1948	1066	1061	1044	1023	1019	0	0%
1949	1063	1049	1031	1014	1010	0	0%
1950	1059	1049	1034	1016	1011	0	0%
1951	1066	1057	1038	1023	1019	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1063	1055	1033	1022	1020	0	0%
1955	1054	1040	1021	1009	1006	0	0%
1956	1066	1061	1045	1024	1023	0	0%
1957	1066	1061	1044	1023	1022	0	0%
1958	1066	1061	1047	1029	1023	0	0%
1959	1054	1045	1020	1005	1005	0	0%
1960	1058	1045	1024	1009	1006	0	0%
1961	1054	1042	1018	1006	1002	0	0%
1962	1056	1049	1031	1016	1012	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1029	1000	986	980	0	0%
1965	1065	1060	1044	1023	1020	0	0%
1966	1061	1051	1032	1018	1015	0	0%
1967	1067	1061	1046	1026	1023	0	0%
1968	1058	1049	1028	1021	1019	0	0%
1969	1066	1061	1045	1024	1023	0	0%
1970	1056	1052	1037	1023	1020	0	0%
1971	1066	1061	1046	1024	1023	0	0%
1972	1061	1053	1030	1019	1017	0	0%
1973	1066	1058	1041	1023	1020	0	0%
1974	1066	1061	1047	1028	1023	0	0%
1975	1067	1061	1045	1025	1023	0	0%
1976	1034	1018	990	979	977	0	0%
1977	949	939	923	912	915	5	100%
1978	1066	1059	1044	1023	1021	0	0%
1979	1066	1054	1035	1023	1019	0	0%
1980	1066	1061	1044	1023	1021	0	0%
1981	1059	1042	1020	1005	1001	0	0%
1982	1066	1061	1045	1024	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1066	1061	1044	1023	1021	0	0%
1985	1040	1021	994	980	977	0	0%
1986	1049	1040	1027	1014	1012	0	0%
1987	1045	1022	997	981	978	0	0%
1988	1024	1009	982	966	961	0	0%
1989	1047	1033	1004	991	988	0	0%
1990	1010	1000	972	958	952	0	0%
1991	965	950	920	908	903	4	80%

28 8%
Percent Availability During Recreation Season 92%

SHASTA RESERVOIR

Shasta Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1044	1023	1018	0	0%
1923	1044	1036	1022	1006	1001	0	0%
1924	977	956	931	910	904	3	60%
1925	1048	1039	1015	1000	994	0	0%
1926	1041	1025	1008	996	988	0	0%
1927	1066	1056	1044	1023	1018	0	0%
1928	1060	1048	1022	999	994	0	0%
1929	999	989	967	952	950	1	20%
1930	1031	1016	997	976	971	0	0%
1931	963	949	918	902	895	4	80%
1932	976	973	955	930	921	2	40%
1933	960	954	933	910	905	3	60%
1934	958	940	914	899	886	4	80%
1935	1022	1003	976	947	936	2	40%
1936	1027	1015	989	960	952	0	0%
1937	1014	1004	977	948	942	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1037	1026	1011	996	989	0	0%
1940	1055	1046	1026	1008	1003	0	0%
1941	1066	1061	1046	1027	1003	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1056	1060	1044	1023	1020	0	0%
1944	1047	1040	1023	1005	1000	0	0%
1945	1061	1050	1030	1012	1008	0	0%
1946	1050	1041	1019	1003	999	0	0%
1947	1031	1028	1009	995	988	0	0%
1948	1056	1061	1044	1023	1018	0	0%
1949	1060	1044	1025	1008	1002	0	0%
1950	1047	1035	1012	992	986	0	0%
1951	1055	1055	1037	1023	1018	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1056	1061	1046	1024	1023	0	0%
1954	1062	1054	1032	1020	1017	0	0%
1955	1047	1034	1014	1001	997	0	0%
1956	1066	1061	1044	1023	1023	0	0%
1957	1055	1058	1044	1023	1021	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1051	1041	1011	996	994	0	0%
1960	1053	1038	1014	995	990	0	0%
1961	1052	1040	1016	998	993	0	0%
1962	1055	1045	1021	1007	1002	0	0%
1963	1066	1061	1044	1023	1020	0	0%
1964	1039	1032	1014	1003	997	0	0%
1965	1064	1053	1043	1023	1019	0	0%
1966	1058	1049	1027	1013	1009	0	0%
1967	1066	1061	1044	1023	1023	0	0%
1968	1055	1046	1022	1016	1012	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1052	1047	1028	1016	1013	0	0%
1971	1066	1061	1044	1023	1020	0	0%
1972	1058	1051	1026	1015	1012	0	0%
1973	1066	1057	1040	1023	1019	0	0%
1974	1066	1061	1046	1027	1023	0	0%
1975	1056	1061	1045	1025	1023	0	0%
1976	1029	1012	986	971	968	5	100%
1977	939	930	910	894	894	0	0%
1978	1066	1065	1052	1036	1023	0	0%
1979	1056	1051	1029	1020	1016	0	0%
1980	1052	1057	1044	1023	1020	0	0%
1981	1056	1059	1018	1003	998	0	0%
1982	1054	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1058	1044	1023	1020	0	0%
1985	1041	1025	1007	996	992	0	0%
1986	1048	1038	1021	1007	1005	0	0%
1987	1036	1014	997	986	980	0	0%
1988	1023	1006	979	958	952	0	0%
1989	1044	1026	1000	982	979	0	0%
1990	1000	992	964	952	952	0	0%
1991	969	952	933	912	908	3	60%

Percent Availability During Recreation Season

29

8%

92%

SHASTA RESERVOIR

**Shasta Elevation (ft)
Revised Max Flow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1039	1019	1011	0	0%
1923	1039	1027	1006	982	973	0	0%
1924	945	919	883	847	829	5	100%
1925	1026	1018	998	976	967	0	0%
1926	1030	1013	992	977	961	0	0%
1927	1066	1056	1038	1016	1006	0	0%
1928	1062	1047	1029	1006	998	0	0%
1929	1012	1002	979	956	946	1	20%
1930	1029	1012	991	969	959	0	0%
1931	945	922	886	841	819	5	100%
1932	935	924	899	862	849	5	100%
1933	920	909	878	838	814	5	100%
1934	908	881	840	766	693	5	100%
1935	982	966	940	906	893	3	60%
1936	1014	1006	983	958	947	1	20%
1937	1023	1016	994	969	958	0	0%
1938	1066	1061	1044	1023	1016	0	0%
1939	1039	1029	1008	984	975	0	0%
1940	1055	1041	1023	1008	999	0	0%
1941	1066	1061	1044	1023	1013	0	0%
1942	1066	1061	1044	1023	1014	0	0%
1943	1066	1057	1039	1017	1007	0	0%
1944	1039	1029	1008	984	975	0	0%
1945	1063	1053	1032	1008	993	0	0%
1946	1054	1041	1023	1001	993	0	0%
1947	1034	1030	1010	989	980	0	0%
1948	1066	1061	1043	1021	1014	0	0%
1949	1066	1053	1035	1016	1007	0	0%
1950	1060	1057	1027	1003	994	0	0%
1951	1066	1052	1031	1008	1000	0	0%
1952	1066	1061	1044	1023	1017	0	0%
1953	1066	1061	1044	1023	1017	0	0%
1954	1061	1050	1031	1013	1007	0	0%
1955	1055	1046	1033	1019	1012	0	0%
1956	1086	1061	1044	1023	1017	0	0%
1957	1066	1058	1043	1023	1018	0	0%
1958	1066	1061	1044	1023	1018	0	0%
1959	1054	1042	1022	1001	996	0	0%
1960	1086	1057	1043	1023	1016	0	0%
1961	1066	1060	1044	1023	1015	0	0%
1962	1084	1055	1034	1012	1004	0	0%
1963	1066	1058	1042	1023	1017	0	0%
1964	1029	1020	1003	984	975	0	0%
1965	1063	1052	1035	1019	1012	0	0%
1966	1082	1049	1033	1013	1006	0	0%
1967	1066	1061	1044	1023	1017	0	0%
1968	1056	1043	1022	1009	1003	0	0%
1969	1086	1061	1044	1023	1018	0	0%
1970	1041	1030	1002	978	969	0	0%
1971	1086	1061	1044	1023	1017	0	0%
1972	1081	1050	1025	1007	1002	0	0%
1973	1085	1053	1036	1019	1012	0	0%
1974	1066	1061	1044	1023	1019	0	0%
1975	1066	1061	1044	1023	1018	0	0%
1976	1030	1016	993	978	971	5	100%
1977	906	875	829	787	781	2	0%
1978	1066	1056	1040	1021	1016	0	0%
1979	1066	1052	1036	1023	1015	0	0%
1980	1082	1052	1037	1021	1015	0	0%
1981	1058	1045	1030	1023	1015	0	0%
1982	1083	1060	1044	1023	1017	0	0%
1983	1066	1061	1044	1023	1020	0	0%
1984	1083	1052	1034	1019	1013	0	0%
1985	1038	1024	1007	990	983	0	0%
1986	1041	1023	999	973	967	0	0%
1987	1012	992	970	953	949	1	20%
1988	1009	991	966	946	938	2	40%
1989	1040	1030	1012	995	988	0	0%
1990	1028	1022	996	975	966	0	0%
1991	974	964	951	934	925	2	40%

Percent Availability During Recreation Season

89%

SHASTA RESERVOIR

Shasta Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1056	1044	1023	1019	0	0%
1923	1038	1028	1012	996	991	0	0%
1924	960	939	913	884	872	4	80%
1925	1041	1031	1010	989	984	0	0%
1926	1034	1017	999	980	975	0	0%
1927	1066	1057	1044	1023	1019	0	0%
1928	1060	1048	1024	1002	997	0	0%
1929	1003	995	974	956	951	0	0%
1930	1029	1012	992	972	967	0	0%
1931	957	938	904	864	851	4	80%
1932	953	949	929	905	895	4	80%
1933	956	948	929	907	903	4	80%
1934	961	945	919	896	888	4	80%
1935	1023	1004	976	947	936	2	40%
1936	1025	1013	987	958	951	0	0%
1937	1014	1005	977	950	943	2	40%
1938	1066	1061	1044	1023	1020	0	0%
1939	1029	1015	998	978	973	0	0%
1940	1056	1042	1021	1003	1001	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1044	1023	1023	0	0%
1943	1066	1058	1044	1023	1020	0	0%
1944	1043	1033	1014	998	993	0	0%
1945	1061	1050	1030	1008	1001	0	0%
1946	1044	1034	1013	996	994	0	0%
1947	1030	1023	1002	981	977	0	0%
1948	1066	1061	1044	1023	1020	0	0%
1949	1062	1044	1024	1001	998	0	0%
1950	1045	1030	1009	989	984	0	0%
1951	1065	1049	1030	1013	1009	0	0%
1952	1066	1061	1044	1023	1023	0	0%
1953	1066	1061	1044	1023	1023	0	0%
1954	1060	1052	1025	1011	1010	0	0%
1955	1047	1031	1015	1001	999	0	0%
1956	1066	1061	1044	1023	1021	0	0%
1957	1066	1057	1044	1023	1022	0	0%
1958	1066	1061	1047	1027	1023	0	0%
1959	1046	1035	1006	990	991	0	0%
1960	1050	1035	1017	998	994	0	0%
1961	1054	1040	1019	1002	1000	0	0%
1962	1055	1042	1021	1006	1001	0	0%
1963	1066	1060	1044	1023	1021	0	0%
1964	1030	1022	1007	992	989	0	0%
1965	1064	1056	1044	1023	1020	0	0%
1966	1058	1047	1029	1014	1011	0	0%
1967	1066	1061	1044	1023	1022	0	0%
1968	1049	1038	1015	1008	1003	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1050	1040	1019	1005	1003	0	0%
1971	1066	1061	1044	1023	1021	0	0%
1972	1053	1044	1018	1006	1005	0	0%
1973	1066	1056	1041	1023	1020	0	0%
1974	1066	1061	1044	1023	1023	0	0%
1975	1066	1061	1044	1023	1023	0	0%
1976	1034	1018	992	978	977	0	0%
1977	927	917	902	881	879	5	100%
1978	1066	1056	1043	1023	1021	0	0%
1979	1066	1049	1031	1021	1014	0	0%
1980	1064	1056	1044	1023	1021	0	0%
1981	1056	1038	1023	1007	1003	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1056	1044	1023	1021	0	0%
1985	1035	1020	1006	991	991	0	0%
1986	1046	1032	1015	1000	1001	0	0%
1987	1034	1010	993	975	972	0	0%
1988	1018	1002	973	957	953	0	0%
1989	1043	1028	1012	998	995	0	0%
1990	1025	1018	986	964	960	0	0%
1991	970	960	944	925	917	3	60%

32 9%
Percent Availability During Recreation Season 91%

SHASTA RESERVOIR

Shasta Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Ramps threshold of 950 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1056	1058	1054	1053	1057	0	0%
1923	1039	1032	1017	1002	994	0	0%
1924	978	961	935	917	910	3	60%
1925	1045	1038	1017	994	986	0	0%
1926	1040	1026	1003	990	981	0	0%
1927	1066	1059	1044	1023	1017	0	0%
1928	1062	1052	1029	1010	1002	0	0%
1929	1014	1009	985	961	953	0	0%
1930	1034	1022	1006	986	977	0	0%
1931	972	961	934	915	908	3	60%
1932	976	974	959	932	921	2	40%
1933	959	957	938	920	912	3	60%
1934	966	952	930	912	902	3	60%
1935	1030	1015	994	964	955	0	0%
1936	1037	1030	1007	979	968	0	0%
1937	1029	1022	1001	971	960	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1037	1027	1009	995	986	0	0%
1940	1057	1048	1031	1015	1006	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1047	1041	1027	1010	1003	0	0%
1945	1062	1052	1034	1017	1011	0	0%
1946	1054	1046	1031	1016	1009	0	0%
1947	1038	1035	1014	997	989	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1063	1048	1032	1016	1008	0	0%
1950	1058	1045	1028	1009	1002	0	0%
1951	1066	1057	1041	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1063	1056	1036	1023	1018	0	0%
1955	1054	1042	1025	1010	1004	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1055	1042	1020	1004	1001	0	0%
1960	1053	1042	1019	1000	992	0	0%
1961	1052	1040	1020	1007	1001	0	0%
1962	1056	1047	1029	1015	1008	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1034	1010	995	986	0	0%
1965	1064	1056	1044	1023	1017	0	0%
1966	1062	1052	1034	1023	1016	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1066	1061	1047	1025	1019	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1054	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1051	1029	1016	1011	0	0%
1973	1066	1061	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1034	1021	1001	988	982	0	0%
1977	947	939	918	902	900	5	100%
1978	1066	1057	1044	1023	1019	0	0%
1979	1066	1055	1039	1023	1016	0	0%
1980	1065	1061	1044	1023	1018	0	0%
1981	1057	1040	1018	1002	994	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1041	1025	1004	988	982	0	0%
1986	1049	1040	1029	1017	1012	0	0%
1987	1043	1022	1000	984	976	0	0%
1988	1018	1006	982	960	953	0	0%
1989	1047	1034	1011	992	985	0	0%
1990	1010	1008	985	965	958	0	0%
1991	972	964	946	926	920	3	60%

Percent Availability During Recreation Season

22 94%

22 94%

Shasta Reservoir 937 msl Recreation Activity Threshold

C - 0 9 2 7 8 0

C-092780

SHASTA RESERVOIR

Shasta Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1044	1036	1022	1006	999	0	0%
1924	977	959	933	915	907	3	60%
1925	1051	1042	1020	997	988	0	0%
1926	1042	1026	1006	993	984	0	0%
1927	1066	1060	1044	1023	1017	0	0%
1928	1062	1051	1026	1003	995	0	0%
1929	1010	1006	986	960	951	0	0%
1930	1034	1021	1005	983	974	0	0%
1931	970	959	929	908	898	3	60%
1932	972	971	956	929	919	2	40%
1933	959	956	936	917	907	3	60%
1934	957	945	924	902	886	3	60%
1935	1024	1009	980	949	935	1	20%
1936	1027	1018	992	961	950	0	0%
1937	1013	1005	981	950	933	1	20%
1938	1066	1061	1045	1023	1023	0	0%
1939	1036	1024	1009	994	985	0	0%
1940	1057	1048	1032	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1046	1039	1023	1006	999	0	0%
1945	1062	1051	1032	1014	1007	0	0%
1946	1053	1044	1026	1009	1002	0	0%
1947	1036	1033	1014	1000	992	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1061	1047	1029	1011	1003	0	0%
1950	1053	1041	1021	999	991	0	0%
1951	1066	1057	1039	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1062	1055	1033	1021	1016	0	0%
1955	1052	1038	1020	1006	1000	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1054	1044	1019	1004	1000	0	0%
1960	1054	1041	1018	1000	993	0	0%
1961	1053	1041	1021	1004	997	0	0%
1962	1056	1047	1025	1010	1003	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1037	1031	1010	998	989	0	0%
1965	1064	1057	1044	1023	1017	0	0%
1966	1061	1052	1032	1020	1014	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1048	1025	1019	1014	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1055	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1052	1028	1017	1012	0	0%
1973	1066	1060	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1035	1022	997	984	978	0	0%
1977	946	937	915	898	896	4	80%
1978	1066	1056	1044	1023	1019	0	0%
1979	1066	1055	1035	1023	1016	0	0%
1980	1065	1060	1044	1023	1018	0	0%
1981	1058	1040	1019	1004	996	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1040	1024	1004	992	986	0	0%
1986	1049	1040	1027	1014	1009	0	0%
1987	1041	1017	996	983	976	0	0%
1988	1021	1008	983	962	955	0	0%
1989	1046	1031	1006	987	980	0	0%
1990	1002	999	971	956	953	0	0%
1991	964	954	934	917	911	3	60%

23

7%

Percent Availability During Recreation Season

93%

SHASTA RESERVOIR

Shasta Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1060	1044	1023	1019	0	0%
1923	1044	1036	1022	1006	1002	2	40%
1924	979	964	942	920	914	2	40%
1925	1046	1041	1015	998	993	0	0%
1926	1043	1028	1000	986	980	0	0%
1927	1066	1061	1044	1023	1022	0	0%
1928	1063	1052	1027	1006	1002	0	0%
1929	1013	1001	974	956	952	0	0%
1930	1033	1019	997	976	971	0	0%
1931	963	952	928	910	905	3	60%
1932	981	978	963	938	927	1	20%
1933	956	953	930	911	907	3	60%
1934	953	936	916	899	887	4	80%
1935	1024	1008	983	955	946	0	0%
1936	1033	1025	998	969	961	0	0%
1937	1025	1016	996	969	962	0	0%
1938	1066	1061	1046	1024	1023	0	0%
1939	1034	1020	996	978	972	0	0%
1940	1060	1051	1036	1019	1015	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1061	1044	1023	1021	0	0%
1944	1049	1042	1023	1005	1001	0	0%
1945	1062	1052	1036	1020	1016	0	0%
1946	1057	1048	1033	1018	1014	0	0%
1947	1041	1036	1013	997	991	0	0%
1948	1066	1061	1044	1023	1019	0	0%
1949	1063	1049	1031	1014	1010	0	0%
1950	1059	1049	1034	1016	1011	0	0%
1951	1066	1057	1038	1023	1019	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1063	1055	1033	1022	1020	0	0%
1955	1054	1040	1021	1009	1006	0	0%
1956	1066	1061	1045	1024	1023	0	0%
1957	1066	1061	1044	1023	1022	0	0%
1958	1066	1061	1047	1029	1023	0	0%
1959	1054	1045	1020	1005	1005	0	0%
1960	1058	1045	1024	1009	1006	0	0%
1961	1054	1042	1018	1006	1002	0	0%
1962	1056	1049	1031	1016	1012	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1029	1000	986	980	0	0%
1965	1065	1060	1044	1023	1020	0	0%
1966	1061	1051	1032	1018	1015	0	0%
1967	1067	1061	1046	1026	1023	0	0%
1968	1058	1049	1028	1021	1019	0	0%
1969	1066	1061	1045	1024	1023	0	0%
1970	1056	1052	1037	1023	1020	0	0%
1971	1066	1061	1046	1024	1023	0	0%
1972	1061	1053	1030	1019	1017	0	0%
1973	1066	1058	1041	1023	1020	0	0%
1974	1066	1061	1047	1028	1023	0	0%
1975	1067	1061	1045	1025	1023	0	0%
1976	1034	1018	990	979	977	0	0%
1977	949	939	923	912	915	3	60%
1978	1066	1059	1044	1023	1021	0	0%
1979	1066	1054	1035	1023	1019	0	0%
1980	1066	1061	1044	1023	1021	0	0%
1981	1059	1042	1020	1005	1001	0	0%
1982	1066	1061	1045	1024	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1066	1061	1044	1023	1021	0	0%
1985	1040	1021	994	980	977	0	0%
1986	1049	1040	1027	1014	1012	0	0%
1987	1045	1022	997	981	978	0	0%
1988	1024	1009	982	966	961	0	0%
1989	1047	1033	1004	991	988	0	0%
1990	1010	1000	972	958	952	0	0%
1991	965	950	920	908	903	3	60%

21 6%
Percent Availability During Recreation Season 94%

SHASTA RESERVOIR

Shasta Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1044	1023	1018	0	0%
1923	1044	1036	1022	1006	1001	0	0%
1924	977	956	931	910	904	3	60%
1925	1048	1039	1015	1000	994	0	0%
1926	1041	1025	1008	996	988	0	0%
1927	1066	1056	1044	1023	1018	0	0%
1928	1060	1048	1022	999	994	0	0%
1929	999	989	967	952	950	0	0%
1930	1031	1016	997	976	971	0	0%
1931	963	949	918	902	895	3	60%
1932	976	973	955	930	921	2	40%
1933	960	954	933	910	905	3	60%
1934	958	940	914	899	886	3	60%
1935	1022	1003	976	947	936	1	20%
1936	1027	1015	989	960	952	0	0%
1937	1014	1004	977	948	942	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1037	1026	1011	996	989	0	0%
1940	1055	1046	1026	1008	1003	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1060	1044	1023	1020	0	0%
1944	1047	1040	1023	1005	1000	0	0%
1945	1061	1050	1030	1012	1008	0	0%
1946	1050	1041	1019	1003	999	0	0%
1947	1031	1028	1009	995	988	0	0%
1948	1066	1061	1044	1023	1018	0	0%
1949	1060	1044	1025	1008	1002	0	0%
1950	1047	1035	1012	992	986	0	0%
1951	1065	1055	1037	1023	1018	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1062	1054	1032	1020	1017	0	0%
1955	1047	1034	1014	1001	997	0	0%
1956	1066	1061	1044	1023	1023	0	0%
1957	1065	1058	1044	1023	1021	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1051	1041	1011	996	994	0	0%
1960	1053	1038	1014	995	990	0	0%
1961	1052	1040	1016	998	993	0	0%
1962	1055	1045	1021	1007	1002	0	0%
1963	1066	1061	1044	1023	1020	0	0%
1964	1039	1032	1014	1003	997	0	0%
1965	1064	1053	1043	1023	1019	0	0%
1966	1058	1049	1027	1013	1009	0	0%
1967	1066	1061	1044	1023	1023	0	0%
1968	1055	1046	1022	1016	1012	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1052	1047	1028	1016	1013	0	0%
1971	1066	1061	1044	1023	1020	0	0%
1972	1058	1051	1026	1015	1012	0	0%
1973	1066	1057	1040	1023	1019	0	0%
1974	1066	1061	1046	1027	1023	0	0%
1975	1066	1061	1045	1025	1023	0	0%
1976	1029	1012	986	971	968	0	0%
1977	939	930	910	894	894	4	80%
1978	1066	1056	1044	1023	1020	0	0%
1979	1066	1051	1029	1020	1016	0	0%
1980	1062	1057	1044	1023	1020	0	0%
1981	1056	1039	1018	1003	998	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1058	1044	1023	1020	0	0%
1985	1041	1025	1007	996	992	0	0%
1986	1048	1038	1021	1007	1005	0	0%
1987	1036	1014	997	986	980	0	0%
1988	1023	1006	979	958	952	0	0%
1989	1044	1026	1000	982	979	0	0%
1990	1000	992	964	952	952	0	0%
1991	969	952	933	912	908	3	60%

22 6%
Percent Availability During Recreation Season 94%

SHASTA RESERVOIR

Shasta Elevation (ft) Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1039	1019	1011	0	0%
1923	1039	1027	1006	982	973	0	0%
1924	945	919	883	847	829	4	80%
1925	1026	1018	998	976	967	0	0%
1926	1030	1013	992	971	961	0	0%
1927	1066	1056	1038	1016	1006	0	0%
1928	1062	1047	1029	1006	998	0	0%
1929	1012	1002	979	956	946	0	0%
1930	1029	1012	991	969	959	0	0%
1931	945	922	886	841	819	4	80%
1932	935	924	899	862	849	5	100%
1933	920	909	878	838	814	5	100%
1934	908	881	840	766	693	5	100%
1935	982	966	940	906	893	2	40%
1936	1014	1006	983	958	947	0	0%
1937	1023	1016	994	969	958	0	0%
1938	1066	1061	1044	1023	1016	0	0%
1939	1029	1010	987	963	953	0	0%
1940	1055	1041	1018	992	983	0	0%
1941	1066	1061	1044	1023	1013	0	0%
1942	1066	1061	1044	1023	1014	0	0%
1943	1066	1057	1039	1017	1007	0	0%
1944	1039	1029	1008	984	975	0	0%
1945	1063	1053	1032	1008	999	0	0%
1946	1054	1041	1023	1001	993	0	0%
1947	1034	1030	1010	989	980	0	0%
1948	1066	1061	1043	1021	1014	0	0%
1949	1066	1053	1035	1016	1007	0	0%
1950	1060	1047	1027	1003	994	0	0%
1951	1066	1052	1031	1008	1000	0	0%
1952	1066	1061	1044	1023	1017	0	0%
1953	1066	1061	1044	1023	1017	0	0%
1954	1061	1050	1031	1013	1007	0	0%
1955	1055	1046	1033	1019	1012	0	0%
1956	1066	1061	1044	1023	1017	0	0%
1957	1066	1058	1043	1023	1018	0	0%
1958	1066	1061	1044	1023	1018	0	0%
1959	1054	1042	1022	1001	996	0	0%
1960	1066	1057	1043	1023	1016	0	0%
1961	1066	1060	1044	1023	1015	0	0%
1962	1064	1055	1034	1012	1004	0	0%
1963	1066	1058	1042	1023	1017	0	0%
1964	1029	1020	1003	984	975	0	0%
1965	1063	1052	1035	1019	1012	0	0%
1966	1062	1049	1033	1013	1006	0	0%
1967	1066	1061	1044	1023	1017	0	0%
1968	1056	1043	1022	1009	1003	0	0%
1969	1066	1061	1044	1023	1018	0	0%
1970	1041	1030	1002	978	969	0	0%
1971	1066	1061	1044	1023	1017	0	0%
1972	1061	1050	1025	1007	1002	0	0%
1973	1065	1053	1036	1019	1012	0	0%
1974	1066	1061	1044	1023	1019	0	0%
1975	1066	1061	1044	1023	1018	0	0%
1976	1030	1016	993	978	971	0	0%
1977	906	875	829	787	781	5	100%
1978	1066	1056	1040	1021	1016	0	0%
1979	1066	1052	1036	1023	1015	0	0%
1980	1062	1052	1037	1021	1015	0	0%
1981	1058	1045	1030	1013	1005	0	0%
1982	1063	1060	1044	1023	1017	0	0%
1983	1066	1061	1044	1023	1020	0	0%
1984	1063	1052	1034	1019	1013	0	0%
1985	1038	1024	1007	990	983	0	0%
1986	1041	1023	999	973	967	0	0%
1987	1012	992	970	953	949	0	0%
1988	1009	991	966	946	938	0	0%
1989	1040	1030	1012	995	988	0	0%
1990	1028	1022	996	975	966	0	0%
1991	974	964	951	934	925	2	40%

32 9%
Percent Availability During Recreation Season 91%

SHASTA RESERVOIR

Shasta Elevation (ft)
Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1056	1044	1023	1019	0	0%
1923	1038	1028	1012	996	991	0	0%
1924	960	939	913	884	872	3	60%
1925	1041	1031	1010	989	984	0	0%
1926	1034	1017	999	980	975	0	0%
1927	1066	1057	1044	1023	1019	0	0%
1928	1060	1048	1024	1002	997	0	0%
1929	1003	995	974	956	951	0	0%
1930	1029	1012	992	972	967	0	0%
1931	957	938	904	864	851	3	60%
1932	953	949	929	905	895	3	60%
1933	956	948	929	907	903	3	60%
1934	961	945	919	896	888	3	60%
1935	1023	1004	976	947	936	1	20%
1936	1025	1013	987	958	951	0	0%
1937	1014	1005	977	950	943	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1029	1015	998	978	973	0	0%
1940	1056	1042	1021	1003	1001	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1044	1023	1023	0	0%
1943	1066	1058	1044	1023	1020	0	0%
1944	1043	1033	1014	998	993	0	0%
1945	1061	1050	1030	1008	1001	0	0%
1946	1044	1034	1013	996	994	0	0%
1947	1030	1023	1002	981	977	0	0%
1948	1066	1061	1044	1023	1020	0	0%
1949	1062	1044	1024	1001	998	0	0%
1950	1045	1030	1009	989	984	0	0%
1951	1065	1049	1030	1013	1009	0	0%
1952	1066	1061	1044	1023	1023	0	0%
1953	1066	1061	1044	1023	1023	0	0%
1954	1060	1052	1025	1011	1010	0	0%
1955	1047	1031	1015	1001	999	0	0%
1956	1066	1061	1044	1023	1021	0	0%
1957	1066	1057	1044	1023	1022	0	0%
1958	1066	1061	1047	1027	1023	0	0%
1959	1046	1035	1006	990	991	0	0%
1960	1050	1035	1017	998	994	0	0%
1961	1054	1040	1019	1002	1000	0	0%
1962	1055	1042	1021	1006	1001	0	0%
1963	1066	1060	1044	1023	1021	0	0%
1964	1030	1022	1007	992	989	0	0%
1965	1064	1056	1044	1023	1020	0	0%
1966	1058	1047	1029	1014	1011	0	0%
1967	1066	1061	1044	1023	1022	0	0%
1968	1049	1038	1015	1008	1003	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1050	1040	1019	1005	1003	0	0%
1971	1066	1061	1044	1023	1021	0	0%
1972	1053	1044	1018	1006	1005	0	0%
1973	1066	1056	1041	1023	1020	0	0%
1974	1066	1061	1044	1023	1023	0	0%
1975	1066	1061	1044	1023	1023	0	0%
1976	1034	1018	992	978	977	0	0%
1977	927	917	902	881	879	5	100%
1978	1066	1056	1043	1023	1021	0	0%
1979	1066	1049	1031	1021	1014	0	0%
1980	1064	1056	1044	1023	1021	0	0%
1981	1056	1038	1023	1007	1003	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1056	1044	1023	1021	0	0%
1985	1035	1020	1006	991	991	0	0%
1986	1046	1032	1015	1000	1001	0	0%
1987	1034	1010	993	975	972	0	0%
1988	1018	1002	973	957	953	0	0%
1989	1043	1028	1012	998	995	0	0%
1990	1025	1018	986	964	960	0	0%
1991	970	960	944	925	917	2	40%

23 7%
Percent Availability During Recreation Season 93%

SHASTA RESERVOIR

Shasta Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Sacramento Arm Marina threshold of 937 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1039	1032	1017	1002	994	0	0%
1924	978	961	935	917	910	3	60%
1925	1045	1038	1017	994	986	0	0%
1926	1040	1026	1003	990	981	0	0%
1927	1066	1059	1044	1023	1017	0	0%
1928	1062	1052	1029	1010	1002	0	0%
1929	1014	1009	985	961	953	0	0%
1930	1034	1022	1006	986	977	0	0%
1931	972	961	934	915	908	3	60%
1932	976	974	959	932	921	2	40%
1933	959	957	938	920	912	2	40%
1934	966	952	930	912	902	3	60%
1935	1030	1015	994	964	955	0	0%
1936	1037	1030	1007	979	968	0	0%
1937	1029	1022	1001	971	960	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1037	1027	1009	995	986	0	0%
1940	1057	1048	1031	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1047	1041	1027	1010	1003	0	0%
1945	1062	1052	1034	1017	1011	0	0%
1946	1054	1046	1031	1016	1009	0	0%
1947	1038	1035	1014	997	989	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1063	1048	1032	1016	1008	0	0%
1950	1058	1045	1028	1009	1002	0	0%
1951	1066	1057	1041	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1063	1056	1036	1023	1018	0	0%
1955	1054	1042	1025	1010	1004	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1055	1044	1020	1004	1001	0	0%
1960	1053	1042	1019	1000	992	0	0%
1961	1052	1040	1020	1007	1001	0	0%
1962	1056	1047	1029	1015	1008	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1034	1010	995	986	0	0%
1965	1064	1056	1044	1023	1017	0	0%
1966	1062	1052	1034	1023	1016	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1047	1025	1019	1013	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1054	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1051	1029	1016	1011	0	0%
1973	1066	1061	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1034	1021	1001	988	982	0	0%
1977	947	939	918	902	900	3	60%
1978	1066	1057	1044	1023	1019	0	0%
1979	1066	1055	1039	1023	1016	0	0%
1980	1065	1061	1044	1023	1018	0	0%
1981	1057	1040	1018	1002	994	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1041	1025	1004	988	982	0	0%
1986	1049	1040	1029	1017	1012	0	0%
1987	1043	1022	1000	984	976	0	0%
1988	1018	1006	982	960	953	0	0%
1989	1047	1034	1011	992	985	0	0%
1990	1010	1008	985	965	958	0	0%
1991	972	964	946	926	920	2	40%

18 5%
Percent Availability During Recreation Season 95%

Shasta Reservoir 907 msl Recreation Activity Threshold

SHASTA RESERVOIR

Shasta Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1044	1036	1022	1006	999	0	0%
1924	977	959	933	915	907	1	20%
1925	1051	1042	1020	997	988	0	0%
1926	1042	1026	1006	993	984	0	0%
1927	1066	1060	1044	1023	1017	0	0%
1928	1062	1051	1026	1003	995	0	0%
1929	1010	1006	986	960	951	0	0%
1930	1034	1021	1005	983	974	0	0%
1931	970	959	929	908	898	1	20%
1932	972	971	956	929	919	0	0%
1933	959	956	936	917	907	1	20%
1934	957	945	924	902	886	2	40%
1935	1024	1009	980	949	935	0	0%
1936	1027	1018	992	961	950	0	0%
1937	1013	1005	981	950	933	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1036	1024	1009	994	985	0	0%
1940	1057	1048	1032	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1046	1039	1023	1006	999	0	0%
1945	1062	1051	1032	1014	1007	0	0%
1946	1053	1044	1026	1009	1002	0	0%
1947	1036	1033	1014	1000	992	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1061	1047	1029	1011	1003	0	0%
1950	1053	1041	1021	999	991	0	0%
1951	1066	1057	1039	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1062	1055	1033	1021	1016	0	0%
1955	1052	1038	1020	1006	1000	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1054	1044	1019	1004	1000	0	0%
1960	1054	1041	1018	1000	993	0	0%
1961	1053	1041	1021	1004	997	0	0%
1962	1056	1047	1025	1010	1003	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1037	1031	1010	998	989	0	0%
1965	1064	1057	1044	1023	1017	0	0%
1966	1061	1052	1032	1020	1014	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1048	1025	1019	1014	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1055	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1052	1028	1017	1012	0	0%
1973	1066	1060	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1035	1022	997	984	978	0	0%
1977	946	937	915	898	896	2	40%
1978	1066	1056	1044	1023	1019	0	0%
1979	1066	1055	1035	1023	1016	0	0%
1980	1065	1060	1044	1023	1018	0	0%
1981	1058	1040	1019	1004	996	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1040	1024	1004	992	986	0	0%
1986	1049	1040	1027	1014	1009	0	0%
1987	1041	1017	996	983	976	0	0%
1988	1021	1008	983	962	955	0	0%
1989	1046	1031	1006	987	980	0	0%
1990	1002	999	971	956	953	0	0%
1991	964	954	934	917	911	0	0%

Percent Availability During Recreation Season

7 2%
98%

SHASTA RESERVOIR

Shasta Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1060	1044	1023	1019	0	0%
1923	1044	1036	1022	1006	1002	0	0%
1924	979	964	942	920	914	0	0%
1925	1046	1041	1015	998	993	0	0%
1926	1043	1028	1000	986	980	0	0%
1927	1066	1061	1044	1023	1022	0	0%
1928	1063	1052	1027	1006	1002	0	0%
1929	1013	1001	974	956	952	0	0%
1930	1033	1019	997	976	971	0	0%
1931	963	952	928	910	905	1	20%
1932	981	978	963	938	927	0	0%
1933	956	953	930	911	907	1	20%
1934	953	936	916	899	887	2	40%
1935	1024	1008	983	955	946	0	0%
1936	1033	1025	998	969	961	0	0%
1937	1025	1016	996	969	962	0	0%
1938	1066	1061	1046	1024	1023	0	0%
1939	1034	1020	996	978	972	0	0%
1940	1060	1051	1036	1019	1015	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1061	1044	1023	1021	0	0%
1944	1049	1042	1023	1005	1001	0	0%
1945	1062	1052	1036	1020	1016	0	0%
1946	1057	1048	1033	1018	1014	0	0%
1947	1041	1036	1013	997	991	0	0%
1948	1066	1061	1044	1023	1019	0	0%
1949	1063	1049	1031	1014	1010	0	0%
1950	1059	1049	1034	1016	1011	0	0%
1951	1066	1057	1038	1023	1019	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1063	1055	1033	1022	1020	0	0%
1955	1054	1040	1021	1009	1006	0	0%
1956	1066	1061	1045	1024	1023	0	0%
1957	1066	1061	1044	1023	1022	0	0%
1958	1066	1061	1047	1029	1023	0	0%
1959	1054	1045	1020	1005	1005	0	0%
1960	1058	1045	1024	1009	1006	0	0%
1961	1054	1042	1018	1006	1002	0	0%
1962	1056	1049	1031	1016	1012	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1029	1000	986	980	0	0%
1965	1065	1060	1044	1023	1020	0	0%
1966	1061	1051	1032	1018	1015	0	0%
1967	1067	1061	1046	1026	1023	0	0%
1968	1058	1049	1028	1021	1019	0	0%
1969	1066	1061	1045	1024	1023	0	0%
1970	1056	1052	1037	1023	1020	0	0%
1971	1066	1061	1046	1024	1023	0	0%
1972	1061	1053	1030	1019	1017	0	0%
1973	1066	1058	1041	1023	1020	0	0%
1974	1066	1061	1047	1028	1023	0	0%
1975	1067	1061	1045	1025	1023	0	0%
1976	1034	1018	990	979	977	0	0%
1977	949	939	923	912	915	0	0%
1978	1066	1059	1044	1023	1021	0	0%
1979	1066	1054	1035	1023	1019	0	0%
1980	1066	1061	1044	1023	1021	0	0%
1981	1059	1042	1020	1005	1001	0	0%
1982	1066	1061	1045	1024	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1066	1061	1044	1023	1021	0	0%
1985	1040	1021	994	980	977	0	0%
1986	1049	1040	1027	1014	1012	0	0%
1987	1045	1022	997	981	978	0	0%
1988	1024	1009	982	966	961	0	0%
1989	1047	1033	1004	991	988	0	0%
1990	1010	1000	972	958	952	0	0%
1991	965	950	920	908	903	1	20%

Percent Availability During Recreation Season

5 1%
99% 20%

SHASTA RESERVOIR

**Shasta Elevation (ft)
Percent Inflow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1044	1023	1018	0	0%
1923	1044	1036	1022	1006	1001	0	0%
1924	977	956	931	910	904	1	20%
1925	1048	1039	1015	1000	994	0	0%
1926	1041	1025	1008	996	988	0	0%
1927	1066	1056	1044	1023	1018	0	0%
1928	1060	1048	1022	999	994	0	0%
1929	999	989	967	952	950	0	0%
1930	1031	1016	997	976	971	0	0%
1931	963	949	918	902	895	2	40%
1932	976	973	955	930	921	0	0%
1933	960	954	933	910	905	1	20%
1934	958	940	914	899	886	2	40%
1935	1022	1003	976	947	936	0	0%
1936	1027	1015	989	960	952	0	0%
1937	1014	1004	977	946	942	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1037	1026	1011	986	989	0	0%
1940	1055	1046	1026	1008	1003	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1020	0	0%
1943	1066	1060	1044	1023	1000	0	0%
1944	1047	1040	1023	1005	1000	0	0%
1945	1061	1050	1030	1012	998	0	0%
1946	1046	1041	1019	1003	999	0	0%
1947	1031	1028	1009	995	988	0	0%
1948	1066	1061	1044	1023	1018	0	0%
1949	1060	1044	1025	1008	1002	0	0%
1950	1047	1035	1012	992	986	0	0%
1951	1065	1055	1037	1023	1018	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1062	1054	1032	1020	1017	0	0%
1955	1047	1034	1014	1001	997	0	0%
1956	1066	1061	1044	1023	1023	0	0%
1957	1065	1058	1044	1023	1021	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1051	1041	1011	996	994	0	0%
1960	1066	1061	1044	1023	1023	0	0%
1961	1052	1040	1016	998	993	0	0%
1962	1055	1045	1021	1007	1002	0	0%
1963	1066	1061	1044	1023	1020	0	0%
1964	1039	1032	1014	1003	997	0	0%
1965	1064	1053	1043	1023	1019	0	0%
1966	1058	1049	1027	1013	1009	0	0%
1967	1066	1061	1044	1023	1023	0	0%
1968	1055	1046	1022	1016	1012	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1052	1047	1028	1016	1013	0	0%
1971	1066	1061	1044	1023	1020	0	0%
1972	1058	1051	1026	1015	1012	0	0%
1973	1066	1057	1040	1023	1019	0	0%
1974	1066	1061	1046	1027	1023	0	0%
1975	1066	1061	1045	1025	1023	0	0%
1976	1029	1012	986	971	968	0	0%
1977	939	930	910	894	894	2	40%
1978	1066	1056	1044	1023	1023	0	0%
1979	1066	1051	1029	1020	1016	0	0%
1980	1062	1057	1044	1023	1020	0	0%
1981	1056	1039	1018	1003	998	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1058	1044	1023	1020	0	0%
1985	1041	1025	1007	996	992	0	0%
1986	1048	1038	1021	1007	1005	0	0%
1987	1036	1014	997	986	980	0	0%
1988	1023	1006	979	958	952	0	0%
1989	1044	1026	1000	982	979	0	0%
1990	1000	992	964	952	952	0	0%
1991	969	952	933	912	908	8	2%
							98%

Percent Availability During Recreation Season

SHASTA RESERVOIR

Shasta Elevation (ft) Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1039	1019	1011	0	0%
1923	1039	1027	1006	982	973	0	0%
1924	945	919	883	847	829	3	60%
1925	1026	1018	998	976	967	0	0%
1926	1030	1013	992	971	961	0	0%
1927	1066	1056	1038	1016	1006	0	0%
1928	1062	1047	1029	1006	998	0	0%
1929	1012	1002	979	956	946	0	0%
1930	1029	1012	991	969	959	0	0%
1931	945	922	886	841	819	3	60%
1932	935	924	899	862	849	3	60%
1933	920	909	878	838	814	3	60%
1934	908	881	840	766	693	4	80%
1935	982	966	940	906	893	2	40%
1936	1014	1006	983	958	947	0	0%
1937	1023	1016	994	969	958	0	0%
1938	1066	1061	1044	1023	1016	0	0%
1939	1029	1010	987	963	953	0	0%
1940	1055	1041	1018	992	983	0	0%
1941	1066	1061	1044	1023	1013	0	0%
1942	1066	1061	1044	1023	1014	0	0%
1943	1066	1057	1039	1017	1007	0	0%
1944	1039	1029	1008	984	975	0	0%
1945	1063	1053	1032	1008	999	0	0%
1946	1054	1041	1023	1001	993	0	0%
1947	1034	1030	1010	989	980	0	0%
1948	1066	1061	1043	1021	1014	0	0%
1949	1066	1053	1035	1016	1007	0	0%
1950	1060	1047	1027	1003	994	0	0%
1951	1066	1052	1031	1008	1000	0	0%
1952	1066	1061	1044	1023	1017	0	0%
1953	1066	1061	1044	1023	1017	0	0%
1954	1061	1050	1031	1013	1007	0	0%
1955	1055	1046	1033	1019	1012	0	0%
1956	1066	1061	1044	1023	1017	0	0%
1957	1066	1058	1043	1023	1018	0	0%
1958	1066	1061	1044	1023	1018	0	0%
1959	1054	1042	1022	1001	996	0	0%
1960	1066	1057	1043	1023	1016	0	0%
1961	1066	1060	1044	1023	1015	0	0%
1962	1064	1055	1034	1012	1004	0	0%
1963	1066	1058	1042	1023	1017	0	0%
1964	1029	1020	1003	984	975	0	0%
1965	1063	1052	1035	1019	1012	0	0%
1966	1062	1049	1033	1013	1006	0	0%
1967	1066	1061	1044	1023	1017	0	0%
1968	1056	1043	1022	1009	1003	0	0%
1969	1066	1061	1044	1023	1018	0	0%
1970	1041	1030	1002	978	969	0	0%
1971	1066	1061	1044	1023	1017	0	0%
1972	1061	1050	1025	1007	1002	0	0%
1973	1065	1053	1036	1019	1012	0	0%
1974	1066	1061	1044	1023	1019	0	0%
1975	1066	1061	1044	1023	1018	0	0%
1976	1030	1016	993	978	971	0	0%
1977	906	875	829	787	781	5	100%
1978	1066	1056	1040	1021	1016	0	0%
1979	1066	1052	1036	1023	1015	0	0%
1980	1062	1052	1037	1021	1015	0	0%
1981	1058	1045	1030	1013	1005	0	0%
1982	1063	1060	1044	1023	1017	0	0%
1983	1066	1061	1044	1023	1020	0	0%
1984	1063	1052	1034	1019	1013	0	0%
1985	1038	1024	1007	990	983	0	0%
1986	1041	1023	999	973	967	0	0%
1987	1012	992	970	953	949	0	0%
1988	1009	991	966	946	938	0	0%
1989	1040	1030	1012	995	988	0	0%
1990	1028	1022	996	975	966	0	0%
1991	974	964	951	934	925	0	0%

SHASTA RESERVOIR

Shasta Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1056	1044	1023	1019	0	0%
1923	1038	1028	1012	996	991	0	0%
1924	960	939	913	884	872	2	40%
1925	1041	1031	1010	989	984	0	0%
1926	1034	1017	999	980	975	0	0%
1927	1066	1057	1044	1023	1019	0	0%
1928	1060	1048	1024	1002	997	0	0%
1929	1003	995	974	956	951	0	0%
1930	1029	1012	992	972	967	0	0%
1931	957	938	904	864	851	3	60%
1932	953	949	929	905	895	2	40%
1933	956	948	929	907	903	2	40%
1934	961	945	919	896	888	2	40%
1935	1023	1004	976	947	936	0	0%
1936	1025	1013	987	958	951	0	0%
1937	1014	1005	977	950	943	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1029	1015	998	978	973	0	0%
1940	1056	1042	1021	1003	1001	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1044	1023	1023	0	0%
1943	1066	1058	1044	1023	1020	0	0%
1944	1043	1033	1014	998	993	0	0%
1945	1061	1050	1030	1008	1001	0	0%
1946	1044	1034	1013	996	994	0	0%
1947	1030	1023	1002	981	977	0	0%
1948	1066	1061	1044	1023	1020	0	0%
1949	1062	1044	1024	1001	998	0	0%
1950	1045	1030	1009	989	984	0	0%
1951	1065	1049	1030	1013	1009	0	0%
1952	1066	1061	1044	1023	1023	0	0%
1953	1066	1061	1044	1023	1023	0	0%
1954	1060	1052	1025	1011	1010	0	0%
1955	1047	1031	1015	1001	999	0	0%
1956	1066	1061	1044	1023	1021	0	0%
1957	1066	1057	1044	1023	1022	0	0%
1958	1066	1061	1047	1027	1023	0	0%
1959	1046	1035	1006	990	991	0	0%
1960	1050	1035	1017	998	994	0	0%
1961	1054	1040	1019	1002	1000	0	0%
1962	1055	1042	1021	1006	1001	0	0%
1963	1066	1060	1044	1023	1021	0	0%
1964	1030	1022	1007	992	989	0	0%
1965	1064	1056	1044	1023	1020	0	0%
1966	1058	1047	1029	1014	1011	0	0%
1967	1066	1061	1044	1023	1022	0	0%
1968	1049	1038	1015	1008	1003	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1050	1040	1019	1005	1003	0	0%
1971	1066	1061	1044	1023	1021	0	0%
1972	1053	1044	1018	1006	1005	0	0%
1973	1066	1056	1041	1023	1020	0	0%
1974	1066	1061	1044	1023	1023	0	0%
1975	1066	1061	1044	1023	1023	0	0%
1976	1034	1018	992	978	977	0	0%
1977	927	917	902	881	879	3	60%
1978	1066	1056	1043	1023	1021	0	0%
1979	1066	1049	1031	1021	1014	0	0%
1980	1064	1056	1044	1023	1021	0	0%
1981	1056	1038	1023	1007	1003	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1056	1044	1023	1021	0	0%
1985	1035	1020	1006	991	991	0	0%
1986	1046	1032	1015	1000	1001	0	0%
1987	1034	1010	993	975	972	0	0%
1988	1018	1002	973	957	953	0	0%
1989	1043	1028	1012	998	995	0	0%
1990	1025	1018	986	964	960	0	0%
1991	970	960	944	925	917	0	0%

14 4%
Percent Availability During Recreation Season 96%

SHASTA RESERVOIR

Shasta Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Pit Arm Ramps threshold of 907 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1039	1032	1017	1002	994	0	0%
1924	978	961	935	917	910	0	0%
1925	1045	1038	1017	994	986	0	0%
1926	1040	1026	1003	990	981	0	0%
1927	1066	1059	1044	1023	1017	0	0%
1928	1062	1052	1029	1010	1002	0	0%
1929	1014	1009	985	961	953	0	0%
1930	1034	1022	1006	986	977	0	0%
1931	972	961	934	915	908	0	0%
1932	976	974	959	932	921	0	0%
1933	959	957	938	920	912	0	0%
1934	966	952	930	912	902	1	20%
1935	1030	1015	994	964	955	0	0%
1936	1037	1030	1007	979	968	0	0%
1937	1029	1022	1001	971	960	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1037	1027	1009	995	986	0	0%
1940	1057	1048	1031	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1047	1041	1027	1010	1003	0	0%
1945	1062	1052	1034	1017	1011	0	0%
1946	1054	1046	1031	1016	1009	0	0%
1947	1038	1035	1014	997	989	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1063	1048	1032	1016	1008	0	0%
1950	1058	1045	1028	1009	1002	0	0%
1951	1066	1057	1041	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1063	1056	1036	1023	1018	0	0%
1955	1054	1042	1025	1010	1004	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1055	1044	1020	1004	1001	0	0%
1960	1053	1042	1019	1000	992	0	0%
1961	1052	1040	1020	1007	1001	0	0%
1962	1056	1047	1029	1015	1008	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1034	1010	995	986	0	0%
1965	1064	1056	1044	1023	1017	0	0%
1966	1062	1052	1034	1023	1016	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1047	1025	1019	1013	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1054	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1051	1029	1016	1011	0	0%
1973	1066	1061	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1034	1021	1001	988	982	0	0%
1977	947	939	918	902	900	2	40%
1978	1066	1057	1044	1023	1019	0	0%
1979	1066	1055	1039	1023	1016	0	0%
1980	1065	1061	1044	1023	1018	0	0%
1981	1057	1040	1018	1002	994	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1041	1025	1004	988	982	0	0%
1986	1049	1040	1029	1017	1012	0	0%
1987	1043	1022	1000	984	976	0	0%
1988	1018	1006	982	960	953	0	0%
1989	1047	1034	1011	992	985	0	0%
1990	1010	1008	985	965	958	0	0%
1991	972	964	946	926	920	0	0%

3 1%
Percent Availability During Recreation Season 99%

Shasta Reservoir 844 msl Recreation Activity Threshold

SHASTA RESERVOIR

Shasta Elevation (ft) No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1044	1036	1022	1006	999	0	0%
1924	977	959	933	915	907	0	0%
1925	1051	1042	1020	997	988	0	0%
1926	1042	1026	1006	993	984	0	0%
1927	1066	1060	1044	1023	1017	0	0%
1928	1062	1051	1026	1003	995	0	0%
1929	1010	1006	986	960	951	0	0%
1930	1034	1021	1005	983	974	0	0%
1931	970	959	929	908	898	0	0%
1932	972	971	956	929	919	0	0%
1933	959	956	936	917	907	0	0%
1934	957	945	924	902	886	0	0%
1935	1024	1009	980	949	935	0	0%
1936	1027	1018	992	961	950	0	0%
1937	1013	1005	981	950	933	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1036	1024	1009	994	985	0	0%
1940	1057	1048	1032	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1046	1039	1023	1006	999	0	0%
1945	1062	1051	1032	1014	1007	0	0%
1946	1053	1044	1026	1009	1002	0	0%
1947	1036	1033	1014	1000	992	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1061	1047	1029	1011	1003	0	0%
1950	1053	1041	1021	999	991	0	0%
1951	1066	1057	1039	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1062	1055	1033	1021	1016	0	0%
1955	1052	1038	1020	1006	1000	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1054	1044	1019	1004	1000	0	0%
1960	1054	1041	1018	1000	993	0	0%
1961	1053	1041	1021	1004	997	0	0%
1962	1056	1047	1025	1010	1003	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1037	1031	1010	998	989	0	0%
1965	1064	1057	1044	1023	1017	0	0%
1966	1061	1052	1032	1020	1014	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1048	1025	1019	1014	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1055	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1052	1028	1017	1012	0	0%
1973	1066	1060	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1035	1022	997	984	978	0	0%
1977	946	937	915	898	896	0	0%
1978	1066	1056	1044	1023	1019	0	0%
1979	1066	1055	1035	1023	1016	0	0%
1980	1065	1060	1044	1023	1018	0	0%
1981	1058	1040	1019	1004	996	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1040	1024	1004	992	986	0	0%
1986	1049	1040	1027	1014	1009	0	0%
1987	1041	1017	996	983	976	0	0%
1988	1021	1008	983	962	955	0	0%
1989	1046	1031	1006	987	980	0	0%
1990	1002	999	971	956	953	0	0%
1991	964	954	934	917	911	0	0%

Percent Availability During Recreation Season

0%
100%

SHASTA RESERVOIR

Shasta Elevation (ft)
State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1060	1044	1023	1019	0	0%
1923	1044	1036	1022	1006	1002	0	0%
1924	979	964	942	920	914	0	0%
1925	1046	1041	1015	998	993	0	0%
1926	1043	1028	1000	986	980	0	0%
1927	1066	1061	1044	1023	1022	0	0%
1928	1063	1052	1027	1006	1002	0	0%
1929	1013	1001	974	956	952	0	0%
1930	1033	1019	997	976	971	0	0%
1931	963	952	928	910	905	0	0%
1932	981	978	963	938	927	0	0%
1933	956	953	930	911	907	0	0%
1934	953	936	916	899	887	0	0%
1935	1024	1008	983	955	946	0	0%
1936	1033	1025	998	969	961	0	0%
1937	1025	1016	996	969	962	0	0%
1938	1066	1061	1046	1024	1023	0	0%
1939	1034	1020	996	978	972	0	0%
1940	1060	1051	1036	1019	1015	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1061	1044	1023	1021	0	0%
1944	1049	1042	1023	1005	1001	0	0%
1945	1062	1052	1036	1020	1016	0	0%
1946	1057	1048	1033	1018	1014	0	0%
1947	1041	1036	1013	997	991	0	0%
1948	1066	1061	1044	1023	1019	0	0%
1949	1063	1049	1031	1014	1010	0	0%
1950	1059	1049	1034	1016	1011	0	0%
1951	1066	1057	1038	1023	1019	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1063	1055	1033	1022	1020	0	0%
1955	1054	1040	1021	1009	1006	0	0%
1956	1066	1061	1045	1024	1023	0	0%
1957	1066	1061	1044	1023	1022	0	0%
1958	1066	1061	1047	1029	1023	0	0%
1959	1054	1045	1020	1005	1005	0	0%
1960	1058	1045	1024	1009	1006	0	0%
1961	1054	1042	1018	1006	1002	0	0%
1962	1056	1049	1031	1016	1012	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1029	1000	986	980	0	0%
1965	1065	1060	1044	1023	1020	0	0%
1966	1061	1051	1032	1018	1015	0	0%
1967	1067	1061	1046	1026	1023	0	0%
1968	1058	1049	1028	1021	1019	0	0%
1969	1066	1061	1045	1024	1023	0	0%
1970	1056	1052	1037	1023	1020	0	0%
1971	1066	1061	1046	1024	1023	0	0%
1972	1061	1053	1030	1019	1017	0	0%
1973	1066	1058	1041	1023	1020	0	0%
1974	1066	1061	1047	1028	1023	0	0%
1975	1067	1061	1045	1025	1023	0	0%
1976	1034	1018	990	979	977	0	0%
1977	949	939	923	912	915	0	0%
1978	1066	1059	1044	1023	1021	0	0%
1979	1066	1054	1035	1023	1019	0	0%
1980	1066	1061	1044	1023	1021	0	0%
1981	1059	1042	1020	1005	1001	0	0%
1982	1066	1061	1045	1024	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1066	1061	1044	1023	1021	0	0%
1985	1040	1021	994	980	977	0	0%
1986	1049	1040	1027	1014	1012	0	0%
1987	1045	1022	997	981	978	0	0%
1988	1024	1009	982	966	961	0	0%
1989	1047	1033	1004	991	988	0	0%
1990	1010	1000	972	958	952	0	0%
1991	965	950	920	908	903	0	0%
						0	0%
						100%	

SHASTA RESERVOIR

Shasta Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1044	1023	1018	0	0%
1923	1044	1036	1022	1006	1001	0	0%
1924	977	956	931	910	904	0	0%
1925	1048	1039	1015	1000	994	0	0%
1926	1041	1025	1008	996	988	0	0%
1927	1066	1056	1044	1023	1018	0	0%
1928	1060	1048	1022	999	994	0	0%
1929	999	989	967	952	950	0	0%
1930	1031	1016	997	976	971	0	0%
1931	963	949	918	902	895	0	0%
1932	976	973	955	930	921	0	0%
1933	960	954	933	910	905	0	0%
1934	958	940	914	899	886	0	0%
1935	1022	1003	976	947	936	0	0%
1936	1027	1015	989	960	952	0	0%
1937	1014	1004	977	948	942	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1037	1026	1011	996	989	0	0%
1940	1055	1046	1026	1008	1003	0	0%
1941	1066	1061	1046	1027	1023	0	0%
1942	1066	1061	1046	1025	1023	0	0%
1943	1066	1060	1044	1023	1020	0	0%
1944	1047	1040	1023	1005	1000	0	0%
1945	1061	1050	1030	1012	1008	0	0%
1946	1050	1041	1019	1003	999	0	0%
1947	1031	1028	1009	995	988	0	0%
1948	1066	1061	1044	1023	1018	0	0%
1949	1060	1044	1025	1008	1002	0	0%
1950	1047	1035	1012	992	986	0	0%
1951	1065	1055	1037	1023	1018	0	0%
1952	1066	1061	1046	1024	1023	0	0%
1953	1066	1061	1046	1024	1023	0	0%
1954	1062	1054	1032	1020	1017	0	0%
1955	1047	1034	1014	1001	997	0	0%
1956	1066	1061	1044	1023	1023	0	0%
1957	1065	1058	1044	1023	1021	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1051	1041	1011	996	994	0	0%
1960	1053	1038	1014	995	990	0	0%
1961	1052	1040	1016	998	993	0	0%
1962	1055	1045	1021	1007	1002	0	0%
1963	1066	1061	1044	1023	1020	0	0%
1964	1039	1032	1014	1003	997	0	0%
1965	1064	1053	1043	1023	1019	0	0%
1966	1058	1049	1027	1013	1009	0	0%
1967	1066	1061	1044	1023	1023	0	0%
1968	1055	1046	1022	1016	1012	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1052	1047	1028	1016	1013	0	0%
1971	1066	1061	1044	1023	1020	0	0%
1972	1058	1051	1026	1015	1012	0	0%
1973	1066	1057	1040	1023	1019	0	0%
1974	1066	1061	1046	1027	1023	0	0%
1975	1066	1061	1045	1025	1023	0	0%
1976	1029	1012	986	971	968	0	0%
1977	939	930	910	894	894	0	0%
1978	1066	1056	1044	1023	1020	0	0%
1979	1066	1051	1029	1020	1016	0	0%
1980	1062	1057	1044	1023	1020	0	0%
1981	1056	1039	1018	1003	998	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1058	1044	1023	1020	0	0%
1985	1041	1025	1007	996	992	0	0%
1986	1048	1038	1021	1007	1005	0	0%
1987	1036	1014	997	986	980	0	0%
1988	1023	1006	979	958	952	0	0%
1989	1044	1026	1000	982	979	0	0%
1990	1000	992	964	952	952	0	0%
1991	969	952	933	912	908	0	0%

Percent Availability During Recreation Season

0%
100%

SHASTA RESERVOIR

**Shasta Elevation (ft)
Revised Max Flow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1057	1039	1019	1011	0	0%
1923	1039	1027	1006	982	973	0	0%
1924	945	919	883	847	829	1	20%
1925	1026	1018	998	976	967	0	0%
1926	1030	1013	992	971	961	0	0%
1927	1066	1056	1038	1016	1006	0	0%
1928	1062	1047	1029	1006	998	0	0%
1929	1012	1002	979	956	946	0	0%
1930	1029	1012	991	969	959	0	0%
1931	945	922	886	841	819	2	40%
1932	935	924	899	862	849	0	0%
1933	920	909	878	838	814	2	40%
1934	908	881	840	766	693	3	60%
1935	982	966	940	906	893	0	0%
1936	1014	1006	983	958	947	0	0%
1937	1023	1016	994	969	958	0	0%
1938	1066	1061	1044	1023	1016	0	0%
1939	1029	1010	987	963	953	0	0%
1940	1055	1041	1018	992	983	0	0%
1941	1066	1061	1044	1023	1013	0	0%
1942	1066	1061	1044	1023	1014	0	0%
1943	1066	1057	1039	1017	1007	0	0%
1944	1039	1029	1008	984	975	0	0%
1945	1063	1053	1032	1008	999	0	0%
1946	1054	1041	1023	1001	993	0	0%
1947	1034	1030	1010	999	990	0	0%
1948	1066	1061	1043	1021	1014	0	0%
1949	1066	1053	1035	1016	1007	0	0%
1950	1066	1047	1027	1003	994	0	0%
1951	1066	1052	1031	1008	1000	0	0%
1952	1066	1061	1044	1023	1017	0	0%
1953	1066	1061	1044	1023	1017	0	0%
1954	1061	1050	1031	1013	1007	0	0%
1955	1055	1046	1033	1019	1012	0	0%
1956	1066	1061	1044	1023	1017	0	0%
1957	1066	1058	1043	1023	1018	0	0%
1958	1066	1061	1044	1023	1018	0	0%
1959	1054	1042	1022	1001	996	0	0%
1960	1066	1057	1043	1023	1016	0	0%
1961	1066	1060	1044	1023	1015	0	0%
1962	1064	1055	1034	1012	1004	0	0%
1963	1066	1058	1042	1023	1017	0	0%
1964	1029	1020	1003	984	975	0	0%
1965	1063	1052	1035	1019	1012	0	0%
1966	1062	1049	1033	1013	1006	0	0%
1967	1066	1061	1044	1023	1017	0	0%
1968	1056	1043	1022	1009	1003	0	0%
1969	1066	1061	1044	1023	1018	0	0%
1970	1041	1030	1002	978	969	0	0%
1971	1066	1061	1044	1023	1017	0	0%
1972	1061	1050	1025	1007	1002	0	0%
1973	1065	1053	1036	1019	1012	0	0%
1974	1066	1061	1044	1023	1019	0	0%
1975	1066	1061	1044	1023	1018	0	0%
1976	1030	1016	993	978	971	0	0%
1977	906	875	829	787	781	3	60%
1978	1066	1056	1040	1021	1016	0	0%
1979	1066	1052	1036	1023	1015	0	0%
1980	1062	1052	1037	1021	1015	0	0%
1981	1058	1045	1030	1013	1005	0	0%
1982	1063	1060	1044	1023	1017	0	0%
1983	1066	1061	1044	1023	1020	0	0%
1984	1063	1052	1034	1019	1013	0	0%
1985	1038	1024	1007	990	983	0	0%
1986	1041	1023	999	973	967	0	0%
1987	1012	992	970	953	949	0	0%
1988	1009	991	966	946	938	0	0%
1989	1040	1030	1012	995	988	0	0%
1990	1028	1022	996	975	966	0	0%
1991	974	964	951	934	925	0	0%

Percent Availability During Recreation Season

97%

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SHASTA RESERVOIR

Shasta Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1056	1044	1023	1019	0	0%
1923	1038	1028	1012	996	991	0	0%
1924	960	939	913	884	872	0	0%
1925	1041	1031	1010	989	984	0	0%
1926	1034	1017	999	980	975	0	0%
1927	1066	1057	1044	1023	1019	0	0%
1928	1060	1048	1024	1002	997	0	0%
1929	1003	995	974	956	951	0	0%
1930	1029	1012	992	972	967	0	0%
1931	957	938	904	864	851	0	0%
1932	953	949	929	905	895	0	0%
1933	956	948	929	907	903	0	0%
1934	961	945	919	896	888	0	0%
1935	1023	1004	976	947	936	0	0%
1936	1025	1013	987	958	951	0	0%
1937	1014	1005	977	950	943	0	0%
1938	1066	1061	1044	1023	1020	0	0%
1939	1029	1015	998	978	973	0	0%
1940	1056	1042	1021	1003	1001	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1044	1023	1023	0	0%
1943	1066	1058	1044	1023	1020	0	0%
1944	1043	1033	1014	998	993	0	0%
1945	1061	1050	1030	1008	1001	0	0%
1946	1044	1034	1013	996	994	0	0%
1947	1030	1023	1002	981	977	0	0%
1948	1066	1061	1044	1023	1020	0	0%
1949	1062	1044	1024	1001	998	0	0%
1950	1045	1030	1009	989	984	0	0%
1951	1065	1049	1030	1013	1009	0	0%
1952	1066	1061	1044	1023	1023	0	0%
1953	1066	1061	1044	1023	1023	0	0%
1954	1060	1052	1025	1011	1010	0	0%
1955	1047	1031	1015	1001	999	0	0%
1956	1066	1061	1044	1023	1021	0	0%
1957	1066	1057	1044	1023	1022	0	0%
1958	1066	1061	1047	1027	1023	0	0%
1959	1046	1035	1006	990	991	0	0%
1960	1050	1035	1017	998	994	0	0%
1961	1054	1040	1019	1002	1000	0	0%
1962	1055	1042	1021	1006	1001	0	0%
1963	1066	1060	1044	1023	1021	0	0%
1964	1030	1022	1007	992	989	0	0%
1965	1064	1056	1044	1023	1020	0	0%
1966	1058	1047	1029	1014	1011	0	0%
1967	1066	1061	1044	1023	1022	0	0%
1968	1049	1038	1015	1008	1003	0	0%
1969	1066	1061	1044	1023	1023	0	0%
1970	1050	1040	1019	1005	1003	0	0%
1971	1066	1061	1044	1023	1021	0	0%
1972	1053	1044	1018	1006	1005	0	0%
1973	1066	1056	1041	1023	1020	0	0%
1974	1066	1061	1044	1023	1023	0	0%
1975	1066	1061	1044	1023	1023	0	0%
1976	1034	1018	992	978	977	0	0%
1977	927	917	902	881	879	0	0%
1978	1066	1056	1043	1023	1021	0	0%
1979	1066	1049	1031	1021	1014	0	0%
1980	1064	1056	1044	1023	1021	0	0%
1981	1056	1038	1023	1007	1003	0	0%
1982	1064	1061	1044	1023	1021	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1064	1056	1044	1023	1021	0	0%
1985	1035	1020	1006	991	991	0	0%
1986	1046	1032	1015	1000	1001	0	0%
1987	1034	1010	993	975	972	0	0%
1988	1018	1002	973	957	953	0	0%
1989	1043	1028	1012	998	995	0	0%
1990	1025	1018	986	964	960	0	0%
1991	970	960	944	925	917	0	0%

Percent Availability During Recreation Season

0%
100%

SHASTA RESERVOIR

Shasta Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Centimudi Ramp threshold of 844 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1066	1058	1044	1023	1017	0	0%
1923	1039	1032	1017	1002	994	0	0%
1924	978	961	935	917	910	0	0%
1925	1045	1038	1017	994	986	0	0%
1926	1040	1026	1003	990	981	0	0%
1927	1066	1059	1044	1023	1017	0	0%
1928	1062	1052	1029	1010	1002	0	0%
1929	1014	1009	985	981	953	0	0%
1930	1034	1022	1006	986	977	0	0%
1931	972	961	934	915	908	0	0%
1932	976	974	959	932	921	0	0%
1933	959	957	938	920	912	0	0%
1934	966	952	930	912	902	0	0%
1935	1030	1015	994	964	955	0	0%
1936	1037	1030	1007	979	968	0	0%
1937	1029	1022	1001	971	960	0	0%
1938	1066	1061	1045	1023	1023	0	0%
1939	1037	1027	1009	995	986	0	0%
1940	1057	1048	1031	1015	1008	0	0%
1941	1066	1061	1046	1026	1023	0	0%
1942	1066	1061	1046	1024	1023	0	0%
1943	1066	1061	1044	1023	1018	0	0%
1944	1047	1041	1027	1010	1003	0	0%
1945	1062	1052	1034	1017	1011	0	0%
1946	1054	1046	1031	1016	1009	0	0%
1947	1038	1035	1014	997	989	0	0%
1948	1066	1061	1044	1023	1016	0	0%
1949	1063	1048	1032	1016	1008	0	0%
1950	1058	1045	1028	1009	1002	0	0%
1951	1066	1057	1041	1023	1016	0	0%
1952	1066	1061	1046	1023	1023	0	0%
1953	1066	1061	1046	1023	1023	0	0%
1954	1063	1056	1036	1023	1018	0	0%
1955	1054	1042	1025	1010	1004	0	0%
1956	1066	1061	1045	1023	1023	0	0%
1957	1066	1061	1044	1023	1019	0	0%
1958	1066	1061	1047	1028	1023	0	0%
1959	1055	1044	1020	1004	1001	0	0%
1960	1053	1042	1019	1000	992	0	0%
1961	1052	1040	1020	1007	1001	0	0%
1962	1056	1047	1029	1015	1008	0	0%
1963	1066	1061	1044	1023	1023	0	0%
1964	1036	1034	1010	995	986	0	0%
1965	1064	1056	1044	1023	1017	0	0%
1966	1062	1052	1034	1023	1016	0	0%
1967	1067	1061	1046	1025	1023	0	0%
1968	1056	1047	1025	1019	1013	0	0%
1969	1066	1061	1045	1023	1023	0	0%
1970	1054	1050	1035	1023	1017	0	0%
1971	1066	1061	1046	1023	1023	0	0%
1972	1060	1051	1029	1016	1011	0	0%
1973	1066	1061	1044	1023	1018	0	0%
1974	1066	1061	1047	1027	1023	0	0%
1975	1066	1061	1045	1024	1023	0	0%
1976	1034	1021	1001	988	982	0	0%
1977	947	939	918	902	900	0	0%
1978	1066	1057	1044	1023	1019	0	0%
1979	1066	1055	1039	1023	1016	0	0%
1980	1065	1061	1044	1023	1018	0	0%
1981	1057	1040	1018	1002	994	0	0%
1982	1066	1061	1045	1023	1023	0	0%
1983	1066	1065	1052	1036	1023	0	0%
1984	1065	1061	1044	1023	1019	0	0%
1985	1041	1025	1004	988	982	0	0%
1986	1049	1040	1029	1017	1012	0	0%
1987	1043	1022	1000	984	976	0	0%
1988	1018	1006	982	960	953	0	0%
1989	1047	1034	1011	992	985	0	0%
1990	1010	1008	985	965	958	0	0%
1991	972	964	946	926	920	0	0%

Percent Availability During Recreation Season 0% 100%

FOLSOM RESERVOIR
DATA

C - 0 9 2 8 0 1

C-092801

Folsom Reservoir 450 msl Recreation Activity Threshold

C - 0 9 2 8 0 2

C-092802

FOLSOM RESERVOIR

Folsom Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	464	437	421	412	3	60%
1924	373	370	365	359	355	5	100%
1925	465	442	423	405	401	4	80%
1926	442	427	409	402	396	5	100%
1927	465	465	454	442	432	2	40%
1928	455	428	418	410	402	4	80%
1929	424	424	406	395	389	5	100%
1930	449	446	430	419	406	5	100%
1931	399	397	392	387	378	5	100%
1932	465	465	454	446	434	2	40%
1933	437	440	425	416	404	5	100%
1934	434	423	410	403	396	5	100%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	3	60%
1937	465	461	444	427	416	3	60%
1938	465	465	463	449	434	2	40%
1939	444	431	412	406	399	5	100%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	460	449	434	2	40%
1944	458	452	425	421	409	3	60%
1945	465	457	428	414	403	3	60%
1946	465	451	428	415	403	3	60%
1947	453	434	417	411	402	4	80%
1948	465	465	458	445	434	2	40%
1949	460	448	429	423	413	4	80%
1950	465	465	447	439	429	3	60%
1951	465	455	428	420	412	3	60%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	456	438	428	410	402	4	80%
1955	449	439	423	409	402	5	100%
1956	465	465	463	449	434	2	40%
1957	465	456	440	432	423	3	60%
1958	465	465	463	449	434	2	40%
1959	447	429	424	403	397	5	100%
1960	454	442	420	403	397	4	80%
1961	427	428	409	401	393	5	100%
1962	452	447	428	406	400	4	80%
1963	465	465	460	449	434	2	40%
1964	443	432	413	401	398	5	100%
1965	460	464	446	440	431	3	60%
1966	453	436	428	404	398	4	80%
1967	465	465	463	449	434	2	40%
1968	448	433	421	408	401	5	100%
1969	465	465	461	449	434	2	40%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	2	40%
1972	455	432	425	404	400	4	80%
1973	465	449	429	425	418	4	80%
1974	465	465	463	449	434	2	40%
1975	465	465	461	449	434	2	40%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	2	40%
1979	465	439	428	414	404	4	80%
1980	465	465	462	449	434	2	40%
1981	447	435	420	406	398	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	463	449	434	2	40%
1984	465	459	443	436	427	3	60%
1985	441	426	407	396	395	5	100%
1986	465	465	449	432	424	3	60%
1987	420	415	399	385	373	5	100%
1988	392	388	383	377	370	5	100%
1989	447	432	409	389	386	5	100%
1990	415	414	406	395	389	5	100%
1991	417	421	406	395	389	5	100%

243 69%
Percent Availability During Recreation Season 31%

FOLSOM RESERVOIR

Folsom Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	464	437	421	412	3	60%
1924	373	370	364	358	353	5	100%
1925	465	441	428	416	406	4	80%
1926	444	429	423	416	404	5	100%
1927	465	465	458	449	434	2	40%
1928	457	431	421	410	402	4	80%
1929	423	423	410	398	392	5	100%
1930	453	443	428	417	404	4	80%
1931	397	395	391	385	376	5	100%
1932	465	463	447	439	428	3	60%
1933	435	427	410	401	396	5	100%
1934	431	423	410	403	395	5	100%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	3	60%
1937	465	461	445	429	417	3	60%
1938	465	465	463	449	434	2	40%
1939	444	430	428	423	409	5	100%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	460	449	434	2	40%
1944	458	445	428	419	407	4	80%
1945	465	456	429	414	403	3	60%
1946	465	451	428	417	403	3	60%
1947	452	437	428	423	410	4	80%
1948	465	465	461	449	434	2	40%
1949	462	449	432	427	418	4	80%
1950	465	465	447	439	428	3	60%
1951	465	453	428	418	409	3	60%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	456	438	428	410	402	4	80%
1955	449	440	428	413	404	5	100%
1956	465	465	463	449	434	2	40%
1957	465	457	443	436	425	3	60%
1958	465	465	463	449	434	2	40%
1959	447	429	423	403	397	5	100%
1960	454	445	428	411	401	4	80%
1961	429	429	424	411	401	5	100%
1962	452	444	428	404	400	4	80%
1963	465	465	460	449	434	2	40%
1964	439	429	423	403	399	5	100%
1965	461	465	456	449	434	2	40%
1966	453	428	423	403	397	4	80%
1967	465	465	463	449	434	2	40%
1968	448	428	416	403	399	5	100%
1969	465	465	461	449	434	2	40%
1970	463	452	428	413	403	3	60%
1971	465	465	461	449	434	2	40%
1972	455	434	427	404	400	4	80%
1973	465	446	428	425	417	4	80%
1974	465	465	463	449	434	2	40%
1975	465	465	461	449	434	2	40%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	2	40%
1979	465	436	428	420	410	4	80%
1980	465	465	462	449	434	2	40%
1981	447	437	428	415	402	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	463	449	434	2	40%
1984	465	459	447	440	431	3	60%
1985	440	428	425	418	409	5	100%
1986	465	465	455	438	429	2	40%
1987	423	418	412	403	392	5	100%
1988	395	391	385	379	370	5	100%
1989	447	434	428	426	416	5	100%
1990	426	423	410	399	393	5	100%
1991	423	423	410	398	392	5	100%

242 69%
Percent Availability During Recreation Season
31%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msf?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	464	437	421	412	3	60%
1924	373	370	365	359	354	5	100%
1925	465	440	418	402	399	4	80%
1926	442	427	411	403	398	5	100%
1927	465	465	445	436	427	3	60%
1928	451	428	417	410	402	4	80%
1929	424	424	414	398	392	5	100%
1930	450	447	431	420	407	5	100%
1931	400	397	393	387	378	5	100%
1932	465	465	454	446	434	2	40%
1933	437	440	426	417	405	5	100%
1934	432	423	411	404	396	5	100%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	3	60%
1937	465	461	447	431	420	3	60%
1938	465	465	463	449	434	2	40%
1939	444	431	413	408	400	5	100%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	460	449	434	2	40%
1944	458	447	424	420	409	4	80%
1945	465	457	428	413	403	3	60%
1946	465	451	428	415	403	3	60%
1947	451	430	412	407	400	4	80%
1948	465	465	452	441	430	2	40%
1949	460	445	427	423	413	4	80%
1950	465	465	448	440	429	3	60%
1951	465	455	428	414	405	3	60%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	455	436	427	410	402	4	80%
1955	447	435	416	404	400	5	100%
1956	465	465	463	449	434	2	40%
1957	465	458	434	428	419	3	60%
1958	465	465	463	449	434	2	40%
1959	447	430	424	403	397	5	100%
1960	453	438	416	402	396	4	80%
1961	427	427	409	401	392	5	100%
1962	452	447	428	406	400	4	80%
1963	465	465	457	449	434	2	40%
1964	439	432	416	406	400	5	100%
1965	458	463	440	434	425	3	60%
1966	446	428	423	403	397	5	100%
1967	465	465	463	449	434	2	40%
1968	448	433	421	408	401	5	100%
1969	465	465	461	449	434	2	40%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	2	40%
1972	455	432	425	404	400	4	80%
1973	465	446	428	423	416	4	80%
1974	465	465	463	449	434	2	40%
1975	465	465	461	449	434	2	40%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	459	449	434	2	40%
1979	465	435	428	406	400	4	80%
1980	465	465	462	449	434	2	40%
1981	447	436	420	405	397	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	463	449	434	2	40%
1984	465	459	435	427	420	3	60%
1985	441	427	409	401	399	5	100%
1986	465	465	451	434	425	2	40%
1987	423	416	399	388	376	5	100%
1988	392	389	383	378	370	5	100%
1989	445	427	402	383	380	5	100%
1990	413	412	406	393	387	5	100%
1991	420	423	406	395	389	5	100%

245 70%
Percent Availability During Recreation Season
30%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	464	440	421	413	3	60%
1924	366	363	356	349	344	5	100%
1925	465	452	424	401	399	3	60%
1926	440	433	423	416	404	5	100%
1927	465	465	445	426	418	3	60%
1928	446	431	394	379	377	5	100%
1929	409	410	405	401	395	5	100%
1930	453	449	433	423	410	4	80%
1931	400	398	384	380	372	5	100%
1932	465	465	458	438	427	2	40%
1933	406	412	407	404	399	5	100%
1934	423	403	386	377	371	5	100%
1935	431	440	426	411	403	5	100%
1936	465	465	443	425	417	3	60%
1937	465	462	445	431	423	3	60%
1938	465	465	463	449	434	2	40%
1939	436	432	425	420	407	5	100%
1940	462	455	443	435	425	3	60%
1941	465	465	460	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	457	442	431	2	40%
1944	453	448	441	427	417	4	80%
1945	464	452	426	414	404	3	60%
1946	454	435	408	395	394	4	80%
1947	449	444	435	427	416	5	100%
1948	465	465	461	449	434	2	40%
1949	465	457	447	438	428	3	60%
1950	465	465	459	449	434	2	40%
1951	465	462	453	444	434	2	40%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	439	419	384	368	371	5	100%
1955	429	420	408	405	401	5	100%
1956	465	465	463	449	434	2	40%
1957	456	447	417	409	402	4	80%
1958	465	465	463	449	434	2	40%
1959	417	345	372	360	361	5	100%
1960	439	433	409	396	390	5	100%
1961	418	410	389	382	374	5	100%
1962	403	374	372	360	363	5	100%
1963	465	457	447	430	423	3	60%
1964	444	411	428	426	417	5	100%
1965	457	462	444	429	421	3	60%
1966	423	406	372	360	360	5	100%
1967	465	411	463	449	434	2	40%
1968	428	407	372	360	363	5	100%
1969	465	465	461	449	434	2	40%
1970	453	412	428	409	401	3	60%
1971	465	413	461	449	434	2	40%
1972	428	403	372	360	365	5	100%
1973	465	417	426	413	405	3	60%
1974	444	415	463	449	434	2	40%
1975	411	465	461	449	434	2	40%
1976	404	380	374	360	354	5	100%
1977	341	340	334	328	323	5	100%
1978	465	465	459	449	434	2	40%
1979	465	434	402	374	373	4	80%
1980	465	465	462	449	434	2	40%
1981	447	438	424	409	400	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	463	449	434	2	40%
1984	465	459	428	418	411	3	60%
1985	447	434	414	394	394	5	100%
1986	465	465	458	441	432	2	40%
1987	402	387	372	369	361	5	100%
1988	361	377	371	357	349	5	100%
1989	447	438	419	413	404	5	100%
1990	391	380	374	360	361	5	100%
1991	449	405	400	397	391	5	100%

250 71%
Percent Availability During Recreation Season
29%

FOLSOM RESERVOIR

Folsom Elevation (ft) Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	464	437	421	412	3	60%
1924	373	370	365	360	355	5	100%
1925	465	439	413	391	386	4	80%
1926	435	419	405	399	393	5	100%
1927	465	465	445	436	427	3	60%
1928	451	428	417	410	402	4	80%
1929	423	423	400	391	385	5	100%
1930	453	451	436	426	414	3	60%
1931	403	401	395	389	380	5	100%
1932	465	465	459	449	434	2	40%
1933	426	429	424	419	407	5	100%
1934	425	406	399	394	385	5	100%
1935	451	453	431	410	401	3	60%
1936	465	465	448	430	419	3	60%
1937	465	461	449	433	423	3	60%
1938	465	465	463	449	434	2	40%
1939	440	418	401	391	384	5	100%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	460	449	434	2	40%
1944	450	433	417	402	395	5	100%
1945	465	456	428	415	403	3	60%
1946	465	451	428	414	403	3	60%
1947	446	424	405	391	386	5	100%
1948	465	465	455	447	434	2	40%
1949	465	453	442	434	424	3	60%
1950	465	465	446	438	428	3	60%
1951	465	453	430	416	407	3	60%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	451	432	423	410	402	4	80%
1955	448	431	418	405	400	5	100%
1956	465	465	463	449	434	2	40%
1957	465	457	432	428	418	3	60%
1958	465	465	463	449	434	2	40%
1959	447	430	424	403	397	5	100%
1960	449	436	419	400	394	5	100%
1961	427	428	421	405	397	5	100%
1962	452	453	428	405	400	3	60%
1963	465	465	452	444	433	2	40%
1964	439	424	410	394	391	5	100%
1965	458	463	440	434	425	3	60%
1966	445	428	423	403	397	5	100%
1967	465	465	463	449	434	2	40%
1968	448	428	416	403	399	5	100%
1969	465	465	461	449	434	2	40%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	2	40%
1972	455	432	425	404	400	4	80%
1973	465	444	428	424	416	4	80%
1974	465	465	463	449	434	2	40%
1975	465	465	461	449	434	2	40%
1976	411	403	396	391	381	5	100%
1977	346	346	341	336	332	5	100%
1978	465	465	459	449	434	2	40%
1979	465	434	428	404	400	4	80%
1980	465	465	462	449	434	2	40%
1981	447	439	424	410	400	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	463	449	434	2	40%
1984	465	459	430	425	419	3	60%
1985	436	423	409	394	393	5	100%
1986	465	465	455	438	430	2	40%
1987	424	412	399	391	380	5	100%
1988	393	389	384	378	370	5	100%
1989	444	429	414	406	401	5	100%
1990	403	402	399	391	385	5	100%
1991	417	412	408	403	397	5	100%

244 70%
Percent Availability During Recreation Season 30%

FOLSOM RESERVOIR

Folsom Elevation (ft) Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 450 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	2	40%
1923	465	459	432	412	406	3	60%
1924	389	389	387	385	379	5	100%
1925	465	442	420	407	404	4	80%
1926	441	427	406	395	392	5	100%
1927	465	465	454	448	434	2	40%
1928	455	431	423	410	404	4	80%
1929	433	426	406	395	392	5	100%
1930	442	440	419	409	403	5	100%
1931	407	405	403	399	393	5	100%
1932	465	465	457	449	434	2	40%
1933	438	443	432	424	415	5	100%
1934	423	419	407	403	397	5	100%
1935	453	457	429	412	403	3	60%
1936	465	465	442	433	426	3	60%
1937	465	463	449	439	430	3	60%
1938	465	465	463	449	434	2	40%
1939	447	429	412	400	396	5	100%
1940	465	459	428	411	405	3	60%
1941	465	465	462	449	434	2	40%
1942	465	465	463	449	434	2	40%
1943	465	465	462	449	434	2	40%
1944	463	455	428	413	405	3	60%
1945	465	451	428	411	404	3	60%
1946	465	445	428	413	403	4	80%
1947	458	440	417	400	396	4	80%
1948	465	465	462	449	434	2	40%
1949	464	449	432	427	420	4	80%
1950	465	465	446	440	431	3	60%
1951	465	455	428	421	414	3	60%
1952	465	465	463	449	434	2	40%
1953	465	465	463	449	434	2	40%
1954	456	441	428	418	410	4	80%
1955	451	443	426	413	406	4	80%
1956	465	465	463	449	434	2	40%
1957	465	456	444	438	429	3	60%
1958	465	465	463	449	434	2	40%
1959	449	428	424	403	400	5	100%
1960	453	443	420	402	398	4	80%
1961	433	435	417	410	402	5	100%
1962	454	451	428	406	403	3	60%
1963	465	465	461	449	434	2	40%
1964	443	434	411	397	396	5	100%
1965	460	465	448	443	434	3	60%
1966	454	432	427	405	401	4	80%
1967	465	465	463	449	434	2	40%
1968	451	428	418	403	401	4	80%
1969	465	465	463	449	434	2	40%
1970	464	445	428	410	404	4	80%
1971	465	465	463	449	434	2	40%
1972	455	429	424	403	401	4	80%
1973	465	452	441	434	427	3	60%
1974	465	465	463	449	434	2	40%
1975	465	465	462	449	434	2	40%
1976	420	417	406	395	388	5	100%
1977	356	356	349	343	337	5	100%
1978	465	465	463	449	434	2	40%
1979	465	439	428	423	415	4	80%
1980	465	465	463	449	434	2	40%
1981	450	440	420	405	398	5	100%
1982	465	465	463	449	434	2	40%
1983	465	465	464	451	434	1	20%
1984	465	453	444	439	431	3	60%
1985	444	427	407	395	396	5	100%
1986	465	465	455	443	434	2	40%
1987	428	419	406	395	386	5	100%
1988	404	401	397	393	386	5	100%
1989	448	435	414	406	403	5	100%
1990	423	419	406	395	392	5	100%
1991	423	419	406	395	391	5	100%

239 68%
Percent Availability During Recreation Season
32%

Folsom Reservoir 430 msl Recreation Activity Threshold

FOLSOM RESERVOIR

Folsom Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	2	40%
1924	373	370	365	359	355	5	100%
1925	465	442	423	405	401	3	60%
1926	442	427	409	402	396	4	80%
1927	465	465	454	442	432	0	0%
1928	455	428	418	410	402	4	80%
1929	424	424	406	395	389	5	100%
1930	449	446	430	419	406	3	60%
1931	399	397	392	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	425	416	404	3	60%
1934	434	423	410	403	396	4	80%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	2	40%
1937	465	461	444	427	416	2	40%
1938	465	465	463	449	434	0	0%
1939	444	431	412	406	399	3	60%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	452	425	421	409	3	60%
1945	465	457	428	414	403	3	60%
1946	465	451	428	415	403	3	60%
1947	453	434	417	411	402	3	60%
1948	465	465	458	445	434	0	0%
1949	460	448	429	423	413	3	60%
1950	465	465	447	439	429	1	20%
1951	465	455	428	420	412	3	60%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	3	60%
1955	449	439	423	409	402	3	60%
1956	465	465	463	449	434	0	0%
1957	465	456	440	432	423	1	20%
1958	465	465	463	449	434	0	0%
1959	447	429	424	403	397	4	80%
1960	454	442	420	403	397	3	60%
1961	427	428	409	401	393	5	100%
1962	452	447	428	406	400	3	60%
1963	465	465	460	449	434	0	0%
1964	443	432	413	401	398	3	60%
1965	460	464	446	440	431	0	0%
1966	453	436	428	404	398	3	60%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	3	60%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	3	60%
1973	465	449	429	425	418	3	60%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	439	428	414	404	3	60%
1980	465	465	462	449	434	0	0%
1981	447	435	420	406	398	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	443	436	427	1	20%
1985	441	426	407	396	395	4	80%
1986	465	465	449	432	424	1	20%
1987	420	415	399	385	373	5	100%
1988	392	388	383	377	370	5	100%
1989	447	432	409	389	386	3	60%
1990	415	414	406	395	389	5	100%
1991	417	421	406	395	389	5	100%

155 44%
Percent Availability During Recreation Season
56%

FOLSOM RESERVOIR

Folsom Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	2	40%
1924	373	370	364	358	353	5	100%
1925	465	441	428	416	406	3	60%
1926	444	429	423	416	404	4	80%
1927	465	465	458	449	434	0	0%
1928	457	431	421	410	402	3	60%
1929	423	423	410	398	392	5	100%
1930	453	443	428	417	404	3	60%
1931	397	395	391	385	376	5	100%
1932	465	463	447	439	428	1	20%
1933	435	427	410	401	396	4	80%
1934	431	423	410	403	395	4	80%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	2	40%
1937	465	461	445	429	417	2	40%
1938	465	465	463	449	434	0	0%
1939	444	430	428	423	409	4	80%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	445	428	419	407	3	60%
1945	465	456	429	414	403	3	60%
1946	465	451	428	417	403	3	60%
1947	452	437	428	423	410	3	60%
1948	465	465	461	449	434	0	0%
1949	462	449	432	427	418	2	40%
1950	465	465	447	439	428	1	20%
1951	465	453	428	418	409	3	60%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	3	60%
1955	449	440	428	413	404	3	60%
1956	465	465	463	449	434	0	0%
1957	465	457	443	436	425	1	20%
1958	465	465	463	449	434	0	0%
1959	447	429	423	403	397	4	80%
1960	454	445	428	411	401	3	60%
1961	429	429	424	411	401	5	100%
1962	452	444	428	404	400	3	60%
1963	465	465	460	449	434	0	0%
1964	439	429	423	403	399	4	80%
1965	461	465	456	449	434	0	0%
1966	453	428	423	403	397	4	80%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	4	80%
1969	465	465	461	449	434	0	0%
1970	463	452	428	413	403	3	60%
1971	465	465	461	449	434	0	0%
1972	455	434	427	404	400	3	60%
1973	465	446	428	425	417	3	60%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	436	428	420	410	3	60%
1980	465	465	462	449	434	0	0%
1981	447	437	428	415	402	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	447	440	431	0	0%
1985	440	428	425	418	409	4	80%
1986	465	465	455	438	429	1	20%
1987	423	418	412	403	392	5	100%
1988	395	391	385	379	370	5	100%
1989	447	434	428	426	416	3	60%
1990	426	423	410	399	393	5	100%
1991	423	423	410	398	392	5	100%

158 45%
Percent Availability During Recreation Season 55%

FOLSOM RESERVOIR

Folsom Elevation (ft) Percent Inflow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	2	40%
1924	373	370	365	359	354	5	100%
1925	465	440	418	402	399	3	60%
1926	442	427	411	403	398	4	80%
1927	465	465	445	436	427	1	20%
1928	451	428	417	410	402	4	80%
1929	424	424	414	398	392	5	100%
1930	450	447	431	420	407	2	40%
1931	400	397	393	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	426	417	405	3	60%
1934	432	423	411	404	396	4	80%
1935	451	453	429	408	402	3	60%
1936	465	465	439	423	410	2	40%
1937	465	461	447	431	420	1	20%
1938	465	465	463	449	434	0	0%
1939	444	431	413	408	400	3	60%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	447	424	420	409	3	60%
1945	465	457	428	413	403	3	60%
1946	465	451	428	415	403	3	60%
1947	451	430	412	407	400	4	80%
1948	465	465	452	441	430	1	20%
1949	460	445	427	423	413	3	60%
1950	465	465	448	440	429	1	20%
1951	465	455	428	414	405	3	60%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	455	436	427	410	402	3	60%
1955	447	435	416	404	400	3	60%
1956	465	465	463	449	434	0	0%
1957	465	458	434	428	419	2	40%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	4	80%
1960	453	438	416	402	396	3	60%
1961	427	427	409	401	392	5	100%
1962	452	447	428	406	400	3	60%
1963	465	465	457	449	434	0	0%
1964	439	432	416	406	400	3	60%
1965	458	463	440	434	425	1	20%
1966	446	428	423	403	397	4	80%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	3	60%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	3	60%
1973	465	446	428	423	416	3	60%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	5	100%
1977	349	349	344	339	335	5	100%
1978	465	465	459	449	434	0	0%
1979	465	435	428	406	400	3	60%
1980	465	465	462	449	434	0	0%
1981	447	436	420	405	397	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	435	427	420	2	40%
1985	441	427	409	401	399	4	80%
1986	465	465	451	434	425	1	20%
1987	423	416	399	388	376	5	100%
1988	392	389	383	378	370	5	100%
1989	445	427	402	383	380	4	80%
1990	413	412	406	393	387	5	100%
1991	420	423	406	395	389	5	100%

161

46%

54%

Percent Availability During Recreation Season

FOLSOM RESERVOIR

Folsom Elevation (ft) Revised Max Flow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	440	421	413	2	40%
1924	366	363	356	349	344	5	100%
1925	465	452	424	401	399	3	60%
1926	440	433	423	416	404	3	60%
1927	465	465	445	426	418	2	40%
1928	446	431	394	379	377	3	60%
1929	409	410	405	401	395	5	100%
1930	453	449	433	423	410	2	40%
1931	400	398	384	380	372	5	100%
1932	465	465	458	438	427	1	20%
1933	406	412	407	404	399	5	100%
1934	423	403	386	377	371	5	100%
1935	431	440	426	411	403	3	60%
1936	465	465	443	425	417	2	40%
1937	465	462	445	431	423	1	20%
1938	465	465	463	449	434	0	0%
1939	436	432	425	420	407	3	60%
1940	462	455	443	435	425	1	20%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	457	442	431	0	0%
1944	453	448	441	427	417	2	40%
1945	464	452	426	414	404	3	60%
1946	454	435	408	395	394	3	60%
1947	449	444	435	427	416	2	40%
1948	465	465	461	449	434	0	0%
1949	465	457	447	438	428	1	20%
1950	465	465	459	449	434	0	0%
1951	465	462	453	444	434	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	439	419	384	368	371	4	80%
1955	429	420	408	405	401	5	100%
1956	465	465	463	449	434	0	0%
1957	456	447	417	409	402	3	60%
1958	465	465	463	449	434	0	0%
1959	417	396	372	360	361	5	100%
1960	439	433	409	396	390	3	60%
1961	418	410	389	382	374	5	100%
1962	403	393	372	360	363	5	100%
1963	465	465	447	430	423	2	40%
1964	444	443	428	426	417	3	60%
1965	457	462	444	429	421	2	40%
1966	423	400	372	360	360	5	100%
1967	465	465	463	449	434	0	0%
1968	428	403	372	360	363	5	100%
1969	465	465	461	449	434	0	0%
1970	463	452	428	409	401	3	60%
1971	465	465	461	449	434	0	0%
1972	428	389	372	360	365	5	100%
1973	465	457	426	413	405	3	60%
1974	465	455	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	408	380	374	360	354	5	100%
1977	340	340	334	328	323	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	402	374	373	3	60%
1980	465	465	462	449	434	0	0%
1981	447	438	424	409	400	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	428	418	411	3	60%
1985	447	434	414	394	394	3	60%
1986	465	465	458	441	432	0	0%
1987	402	387	372	369	361	5	100%
1988	380	377	371	357	349	5	100%
1989	447	438	419	413	404	3	60%
1990	391	380	374	360	361	5	100%
1991	410	405	400	397	391	5	100%

165 47%
Percent Availability During Recreation Season 53%

FOLSOM RESERVOIR

Folsom Elevation (ft) Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	2	40%
1924	373	370	365	360	355	5	100%
1925	465	439	413	391	366	3	60%
1926	435	419	405	399	393	4	80%
1927	465	465	445	436	427	1	20%
1928	451	428	417	410	402	4	80%
1929	423	423	400	391	385	5	100%
1930	453	451	436	426	414	2	40%
1931	403	401	395	389	380	5	100%
1932	465	465	459	449	434	0	0%
1933	426	429	424	419	407	5	100%
1934	425	406	399	394	385	5	100%
1935	451	453	431	410	401	2	40%
1936	465	465	448	430	419	2	40%
1937	465	461	449	433	423	1	20%
1938	465	465	463	449	434	0	0%
1939	440	418	401	391	384	4	80%
1940	465	457	428	410	403	3	60%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	450	433	417	402	395	3	60%
1945	465	456	428	415	403	3	60%
1946	465	451	428	414	403	3	60%
1947	446	424	405	391	386	4	80%
1948	465	465	455	447	434	0	0%
1949	465	453	442	434	424	1	20%
1950	465	465	446	438	428	1	20%
1951	465	453	430	416	407	3	60%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	451	432	423	410	402	3	60%
1955	448	431	418	405	400	3	60%
1956	465	465	463	449	434	0	0%
1957	465	457	432	428	418	2	40%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	4	80%
1960	449	436	419	400	394	3	60%
1961	427	428	421	405	397	5	100%
1962	452	453	428	405	400	3	60%
1963	465	465	452	444	433	0	0%
1964	439	424	410	394	391	4	80%
1965	458	463	440	434	425	1	20%
1966	445	428	423	403	397	4	80%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	4	80%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	3	60%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	3	60%
1973	465	444	428	424	416	3	60%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	411	403	396	391	381	5	100%
1977	346	346	341	336	332	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	428	404	400	3	60%
1980	465	465	462	449	434	0	0%
1981	447	439	424	410	400	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	430	425	419	3	60%
1985	436	423	409	394	393	4	80%
1986	465	465	455	438	430	1	20%
1987	424	412	399	391	380	5	100%
1988	393	389	384	378	370	5	100%
1989	444	429	414	406	401	4	80%
1990	403	402	399	391	385	5	100%
1991	417	412	408	403	397	5	100%

164 47%
Percent Availability During Recreation Season
53%

FOLSOM RESERVOIR

Folsom Elevation (ft) Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 430 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	459	432	412	406	2	40%
1924	389	389	387	385	379	5	100%
1925	465	442	420	407	404	3	60%
1926	441	427	406	395	392	4	80%
1927	465	465	454	448	434	0	0%
1928	455	431	423	410	404	3	60%
1929	433	426	406	395	392	4	80%
1930	442	440	419	409	403	3	60%
1931	407	406	403	399	393	5	100%
1932	465	465	457	449	434	0	0%
1933	438	443	432	424	415	2	40%
1934	423	419	407	403	397	5	100%
1935	453	457	429	412	403	3	60%
1936	465	465	442	433	426	1	20%
1937	465	463	449	439	430	1	20%
1938	465	465	463	449	434	0	0%
1939	447	429	412	400	396	4	80%
1940	465	459	428	411	405	3	60%
1941	465	465	462	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	462	449	434	0	0%
1944	463	455	428	413	405	3	60%
1945	465	451	428	411	404	3	60%
1946	465	445	428	413	403	3	60%
1947	458	440	417	400	396	3	60%
1948	465	465	462	449	434	0	0%
1949	464	449	432	427	420	2	40%
1950	465	465	446	440	431	0	0%
1951	465	455	428	421	414	3	60%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	441	428	418	410	3	60%
1955	451	443	426	413	406	3	60%
1956	465	465	463	449	434	0	0%
1957	465	456	444	438	429	1	20%
1958	465	465	463	449	434	0	0%
1959	449	428	424	403	400	4	80%
1960	453	443	420	402	398	3	60%
1961	433	435	417	410	402	3	60%
1962	454	451	428	406	403	3	60%
1963	465	465	461	449	434	0	0%
1964	443	434	411	397	396	3	60%
1965	460	465	448	443	434	0	0%
1966	454	432	427	405	401	3	60%
1967	465	465	463	449	434	0	0%
1968	451	428	418	403	401	4	80%
1969	465	465	463	449	434	0	0%
1970	464	445	428	410	404	3	60%
1971	465	465	463	449	434	0	0%
1972	455	429	424	403	401	4	80%
1973	465	452	441	434	427	1	20%
1974	465	465	463	449	434	0	0%
1975	465	465	462	449	434	0	0%
1976	420	417	406	395	388	5	100%
1977	356	356	349	343	337	5	100%
1978	465	465	463	449	434	0	0%
1979	465	439	428	423	415	3	60%
1980	465	465	463	449	434	0	0%
1981	450	440	420	405	398	3	60%
1982	465	465	463	449	434	0	0%
1983	465	465	464	451	434	0	0%
1984	465	453	444	439	431	0	0%
1985	444	427	407	395	396	4	80%
1986	465	465	455	443	434	0	0%
1987	428	419	406	395	386	5	100%
1988	404	401	397	393	386	5	100%
1989	448	435	414	406	403	3	60%
1990	423	419	406	395	392	5	100%
1991	423	419	406	395	391	5	100%

146

42%

58%

Percent Availability During Recreation Season

Folsom Reservoir 405 msl Recreation Activity Threshold

FOLSOM RESERVOIR

Folsom Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	359	355	5	100%
1925	465	442	423	405	401	2	40%
1926	442	427	409	402	396	2	40%
1927	465	465	454	442	432	0	0%
1928	455	428	418	410	402	1	20%
1929	424	424	406	395	389	2	40%
1930	449	446	430	419	406	0	0%
1931	399	397	392	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	425	416	404	1	20%
1934	434	423	410	403	396	2	40%
1935	451	453	429	408	402	1	20%
1936	465	465	439	423	410	0	0%
1937	465	461	444	427	416	0	0%
1938	465	465	463	449	434	0	0%
1939	444	431	412	406	399	1	20%
1940	465	457	428	410	403	1	20%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	452	425	421	409	0	0%
1945	465	457	428	414	403	1	20%
1946	465	451	428	415	403	1	20%
1947	453	434	417	411	402	1	20%
1948	465	465	458	445	434	0	0%
1949	460	448	429	423	413	0	0%
1950	465	465	447	439	429	0	0%
1951	465	455	428	420	412	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	1	20%
1955	449	439	423	409	402	1	20%
1956	465	465	463	449	434	0	0%
1957	465	456	440	432	423	0	0%
1958	465	465	463	449	434	0	0%
1959	447	429	424	403	397	2	40%
1960	454	442	420	403	397	2	40%
1961	427	428	409	401	393	2	40%
1962	452	447	428	406	400	1	20%
1963	465	465	460	449	434	0	0%
1964	443	432	413	401	398	2	40%
1965	460	464	446	440	431	0	0%
1966	453	436	428	404	398	2	40%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	1	20%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	1	20%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	2	40%
1973	465	449	429	425	418	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	439	428	414	404	1	20%
1980	465	465	462	449	434	0	0%
1981	447	435	420	406	398	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	443	436	427	0	0%
1985	441	426	407	396	395	2	40%
1986	465	465	449	432	424	0	0%
1987	420	415	399	385	373	3	60%
1988	392	388	383	377	370	5	100%
1989	447	432	409	389	386	2	40%
1990	415	414	406	395	389	2	40%
1991	417	421	406	395	389	2	40%

69 20%
Percent Availability During Recreation Season
80%

FOLSOM RESERVOIR

Folsom Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	364	358	353	5	100%
1925	465	441	428	416	406	0	0%
1926	444	429	423	416	404	1	20%
1927	465	465	458	449	434	0	0%
1928	457	431	421	410	402	1	20%
1929	423	423	410	398	392	2	40%
1930	453	443	428	417	404	1	20%
1931	397	395	391	385	376	5	100%
1932	465	463	447	439	428	0	0%
1933	435	427	410	401	396	2	40%
1934	431	423	410	403	395	2	40%
1935	451	453	429	408	402	1	20%
1936	465	465	439	423	410	0	0%
1937	465	461	445	429	417	0	0%
1938	465	465	463	449	434	0	0%
1939	444	430	428	423	409	0	0%
1940	465	457	428	410	403	1	20%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	445	428	419	407	0	0%
1945	465	456	429	414	403	1	20%
1946	465	451	428	417	403	1	20%
1947	452	437	428	423	410	0	0%
1948	465	465	461	449	434	0	0%
1949	462	449	432	427	418	0	0%
1950	465	465	447	439	428	0	0%
1951	465	453	428	418	409	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	1	20%
1955	449	440	428	413	404	1	20%
1956	465	465	463	449	434	0	0%
1957	465	457	443	436	425	0	0%
1958	465	465	463	449	434	0	0%
1959	447	429	423	403	397	2	40%
1960	454	445	428	411	401	1	20%
1961	429	429	424	411	401	1	20%
1962	452	444	428	404	400	2	40%
1963	465	465	460	449	434	0	0%
1964	439	429	423	403	399	2	40%
1965	461	465	456	449	434	0	0%
1966	453	428	423	403	397	2	40%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	2	40%
1969	465	465	461	449	434	0	0%
1970	463	452	428	413	403	1	20%
1971	465	465	461	449	434	0	0%
1972	455	434	427	404	400	2	40%
1973	465	446	428	425	417	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	436	428	420	410	0	0%
1980	465	465	462	449	434	0	0%
1981	447	437	428	415	402	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	447	440	431	0	0%
1985	440	428	425	418	409	0	0%
1986	465	465	455	438	429	0	0%
1987	423	418	412	403	392	2	40%
1988	395	391	385	379	370	5	100%
1989	447	434	428	426	416	0	0%
1990	426	423	410	399	393	2	40%
1991	423	423	410	398	392	2	40%

Percent Availability During Recreation Season

60 17%
83%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	359	354	5	100%
1925	465	440	418	402	399	2	40%
1926	442	427	411	403	398	2	40%
1927	465	465	445	436	427	0	0%
1928	451	428	417	410	402	1	20%
1929	424	424	414	398	392	2	40%
1930	450	447	431	420	407	0	0%
1931	400	397	393	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	426	417	405	1	20%
1934	432	423	411	404	396	2	40%
1935	451	453	429	408	402	1	20%
1936	465	465	439	423	410	0	0%
1937	465	461	447	431	420	0	0%
1938	465	465	463	449	434	0	0%
1939	444	431	413	408	400	1	20%
1940	465	457	428	410	403	1	20%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	1	20%
1943	465	465	460	449	434	0	0%
1944	458	447	424	420	409	0	0%
1945	465	457	428	413	403	1	20%
1946	465	451	428	415	403	1	20%
1947	451	430	412	407	400	1	20%
1948	465	465	452	441	430	0	0%
1949	460	445	427	423	413	0	0%
1950	465	465	448	440	429	0	0%
1951	465	455	428	414	405	1	20%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	455	436	427	410	402	1	20%
1955	447	435	416	404	400	2	40%
1956	465	465	463	449	434	0	0%
1957	465	488	434	428	419	0	0%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	2	40%
1960	453	438	416	402	396	2	40%
1961	427	427	409	401	392	2	40%
1962	452	447	428	406	400	1	20%
1963	465	465	457	449	434	0	0%
1964	439	432	416	406	406	1	20%
1965	458	463	440	434	425	0	0%
1966	446	428	423	403	397	2	40%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	1	20%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	1	20%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	2	40%
1973	465	446	428	423	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	459	449	434	0	0%
1979	465	435	428	406	400	1	20%
1980	465	465	462	449	434	0	0%
1981	447	436	420	405	397	2	40%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	435	427	420	0	0%
1985	441	427	409	401	399	2	40%
1986	465	465	451	434	425	0	0%
1987	423	416	399	388	376	3	60%
1988	392	389	383	378	370	5	100%
1989	445	427	402	383	380	3	60%
1990	413	412	406	393	387	2	40%
1991	420	423	406	395	389	2	40%

Percent Availability During Recreation Season

72%
79%

FOLSOM RESERVOIR

Folsom Elevation (ft) Revised Max Flow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	440	421	413	0	0%
1924	365	363	356	349	344	5	100%
1925	465	452	424	401	399	2	40%
1926	440	433	423	416	404	1	20%
1927	465	465	445	426	418	0	0%
1928	446	431	394	379	377	3	60%
1929	409	410	405	401	395	3	60%
1930	453	449	433	423	410	0	0%
1931	400	398	384	380	372	5	100%
1932	465	465	458	438	427	0	0%
1933	406	412	407	404	399	2	40%
1934	423	403	386	377	371	4	80%
1935	431	440	426	411	403	1	20%
1936	465	465	443	425	417	0	0%
1937	465	462	445	431	423	0	0%
1938	465	465	463	449	434	0	0%
1939	436	432	425	420	407	0	0%
1940	462	455	443	435	425	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	457	442	431	0	0%
1944	453	448	441	427	417	0	0%
1945	464	452	426	414	404	1	20%
1946	454	435	408	395	394	2	40%
1947	449	444	435	427	416	0	0%
1948	465	465	461	449	434	0	0%
1949	465	457	447	438	428	0	0%
1950	465	465	459	449	434	0	0%
1951	465	462	453	444	434	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	439	419	384	368	371	3	60%
1955	429	420	408	405	401	2	40%
1956	465	465	463	449	434	0	0%
1957	456	447	417	409	402	1	20%
1958	465	465	463	449	434	0	0%
1959	417	396	372	360	361	4	80%
1960	439	433	409	396	390	2	40%
1961	418	410	389	382	374	3	60%
1962	403	393	372	360	363	5	100%
1963	465	465	447	430	423	0	0%
1964	444	443	428	426	417	0	0%
1965	457	462	444	429	421	0	0%
1966	423	400	372	360	360	4	80%
1967	465	465	463	449	434	0	0%
1968	428	403	372	360	363	4	80%
1969	465	465	461	449	434	0	0%
1970	463	452	428	409	401	1	20%
1971	465	465	461	449	434	0	0%
1972	428	389	372	360	365	4	80%
1973	465	457	426	413	405	1	20%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	408	380	374	360	354	4	80%
1977	340	340	334	328	323	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	402	374	373	3	60%
1980	465	465	462	449	434	0	0%
1981	447	438	424	409	400	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	428	418	411	0	0%
1985	447	434	414	394	394	2	40%
1986	465	465	458	441	432	0	0%
1987	402	387	372	369	361	5	100%
1988	380	377	371	357	349	5	100%
1989	447	438	419	413	404	1	20%
1990	391	380	374	360	361	5	100%
1991	410	405	400	397	391	4	80%

Percent Availability During Recreation Season

98 28%
72%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Flow Evaluation Study Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	485	483	449	434	0	0%
1923	465	484	437	421	412	0	0%
1924	373	370	365	360	355	5	100%
1925	465	459	413	391	386	2	40%
1926	435	419	405	399	393	3	60%
1927	465	485	445	436	427	0	0%
1928	451	428	417	410	402	1	20%
1929	423	423	406	391	385	3	60%
1930	453	451	436	426	414	0	0%
1931	403	401	395	389	380	5	100%
1932	465	465	459	449	434	0	0%
1933	426	429	424	419	407	0	0%
1934	425	406	399	394	385	3	60%
1935	451	483	431	410	401	1	20%
1936	465	455	448	430	419	0	0%
1937	465	461	449	433	423	0	0%
1938	465	485	463	449	434	0	0%
1939	440	418	401	391	384	3	60%
1940	465	457	428	410	403	1	20%
1941	465	485	460	449	434	0	0%
1942	465	485	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	450	433	417	402	395	2	40%
1945	465	456	428	415	403	1	20%
1946	465	451	428	414	403	1	20%
1947	465	424	405	391	386	3	60%
1948	465	424	405	391	386	3	60%
1949	465	453	442	434	424	0	0%
1950	465	465	446	438	428	0	0%
1951	455	453	430	416	407	0	0%
1952	465	465	463	449	434	0	0%
1953	465	485	463	449	434	0	0%
1954	451	432	423	410	402	1	20%
1955	48	431	418	405	400	2	40%
1956	465	485	463	449	434	0	0%
1957	465	457	432	428	418	0	0%
1958	465	485	463	449	434	0	0%
1959	47	430	424	403	397	2	40%
1960	449	436	419	400	394	2	40%
1961	427	428	421	405	397	2	40%
1962	452	453	428	405	400	2	40%
1963	465	465	452	444	433	0	0%
1964	439	424	410	394	391	2	40%
1965	458	483	440	434	425	0	0%
1966	445	428	423	403	397	2	40%
1967	465	485	463	449	434	0	0%
1968	448	428	416	403	399	2	40%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	1	20%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	2	40%
1973	465	444	428	424	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	485	461	449	434	0	0%
1976	411	403	396	391	381	4	80%
1977	346	346	341	336	332	5	100%
1978	465	465	459	449	434	0	0%
1979	465	459	430	425	419	0	0%
1980	465	465	461	449	434	0	0%
1981	447	439	424	410	400	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	434	428	404	2	40%
1985	436	423	409	394	393	2	40%
1986	465	455	438	430	0	0%	
1987	424	412	399	391	380	3	60%
1988	393	389	384	378	370	5	100%
1989	444	429	414	406	401	1	20%
1990	403	402	399	391	385	5	100%
1991	417	412	408	403	397	2	40%
						84	24%
							76%

Percent Availability During Recreation Season

FOLSOM RESERVOIR

Folsom Elevation (ft)
Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 405 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	459	434	0	0%
1923	465	459	432	412	406	0	0%
1924	389	389	387	385	379	5	100%
1925	465	442	420	407	404	1	20%
1926	441	427	406	395	392	2	40%
1927	465	465	454	448	434	0	0%
1928	455	431	423	410	404	1	20%
1929	433	426	406	395	392	2	40%
1930	442	440	419	409	403	1	20%
1931	407	406	403	399	393	3	60%
1932	465	465	457	449	434	0	0%
1933	438	443	432	424	415	0	0%
1934	423	419	407	403	397	2	40%
1935	453	457	429	412	403	1	20%
1936	465	465	442	433	426	0	0%
1937	465	463	449	439	430	0	0%
1938	465	465	463	449	434	0	0%
1939	447	429	412	400	396	2	40%
1940	465	459	428	411	405	1	20%
1941	465	465	462	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	462	449	434	0	0%
1944	463	455	428	413	405	1	20%
1945	465	451	428	411	404	1	20%
1946	465	445	428	413	403	1	20%
1947	456	446	417	400	396	2	40%
1948	465	465	462	449	434	0	0%
1949	464	446	432	427	420	0	0%
1950	465	465	446	440	431	0	0%
1951	465	455	426	421	414	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	441	428	418	410	0	0%
1955	451	443	426	413	406	0	0%
1956	465	465	463	449	434	0	0%
1957	465	456	444	438	429	0	0%
1958	465	465	463	449	434	0	0%
1959	449	426	424	403	400	2	40%
1960	453	443	420	402	398	2	40%
1961	433	435	417	410	402	1	20%
1962	454	451	428	406	403	1	20%
1963	465	465	461	449	434	0	0%
1964	443	434	411	397	396	2	40%
1965	460	465	448	443	434	0	0%
1966	454	432	427	405	401	2	40%
1967	465	465	463	449	434	0	0%
1968	451	428	418	403	401	2	40%
1969	465	465	463	449	434	0	0%
1970	464	445	428	410	404	1	20%
1971	465	465	448	449	434	0	0%
1972	455	429	424	403	401	2	40%
1973	465	452	441	434	427	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	462	449	434	0	0%
1976	420	417	406	395	388	2	40%
1977	356	356	349	343	337	5	100%
1978	465	465	463	449	434	0	0%
1979	465	453	444	439	431	0	0%
1980	465	465	463	449	434	0	0%
1981	450	440	420	405	398	2	40%
1982	465	465	463	449	434	0	0%
1983	465	465	464	451	434	0	0%
1984	465	453	444	439	431	0	0%
1985	444	427	407	395	396	2	40%
1986	465	455	443	434	434	0	0%
1987	428	419	406	395	386	2	40%
1988	404	397	393	386	5	100%	
1989	448	435	414	406	403	1	20%
1990	423	419	406	395	392	2	40%
1991	423	419	406	395	391	2	40%

Percent Availability During Recreation Season

82%

64

18%

Folsom Reservoir 400 msl Recreation Activity Threshold

FOLSOM RESERVOIR

Folsom Elevation (ft) No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	359	355	5	100%
1925	465	442	423	405	401	0	0%
1926	442	427	409	402	396	1	20%
1927	465	465	454	442	432	0	0%
1928	455	428	418	410	402	0	0%
1929	424	424	406	395	389	2	40%
1930	449	446	430	419	406	0	0%
1931	399	397	392	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	425	416	404	0	0%
1934	434	423	410	403	396	1	20%
1935	451	453	429	408	402	0	0%
1936	465	465	439	423	410	0	0%
1937	465	461	444	427	416	0	0%
1938	465	465	463	449	434	0	0%
1939	444	431	412	406	399	1	20%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	452	425	421	409	0	0%
1945	465	457	428	414	403	0	0%
1946	465	451	428	415	403	0	0%
1947	453	434	417	411	402	0	0%
1948	465	465	458	445	434	0	0%
1949	460	448	429	423	413	0	0%
1950	465	465	447	439	429	0	0%
1951	465	455	428	420	412	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	0	0%
1955	449	439	423	409	402	0	0%
1956	465	465	463	449	434	0	0%
1957	465	456	440	432	423	0	0%
1958	465	465	463	449	434	0	0%
1959	447	429	424	403	397	1	20%
1960	454	442	420	403	397	1	20%
1961	427	428	409	401	393	1	20%
1962	452	447	428	406	400	1	20%
1963	465	465	460	449	434	0	0%
1964	443	432	413	401	398	1	20%
1965	460	464	446	440	431	0	0%
1966	453	436	428	404	398	1	20%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	0	0%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	1	20%
1973	465	449	429	425	418	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	439	428	414	404	0	0%
1980	465	465	462	449	434	0	0%
1981	447	435	420	406	398	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	443	436	427	0	0%
1985	441	426	407	396	395	2	40%
1986	465	465	449	432	424	0	0%
1987	420	415	399	385	373	3	60%
1988	392	388	383	377	370	5	100%
1989	447	432	409	389	386	2	40%
1990	415	414	406	395	389	2	40%
1991	417	421	406	395	389	2	40%

47

13%

87%

Percent Availability During Recreation Season

FOLSOM RESERVOIR

Folsom Elevation (ft) State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	364	358	353	5	100%
1925	465	441	428	416	406	0	0%
1926	444	429	423	416	404	0	0%
1927	465	465	458	449	434	0	0%
1928	457	431	421	410	402	0	0%
1929	423	423	410	398	392	2	40%
1930	453	443	428	417	404	0	0%
1931	397	395	391	385	376	5	100%
1932	465	463	447	439	428	0	0%
1933	435	427	410	401	396	1	20%
1934	431	423	410	403	395	1	20%
1935	451	453	429	408	402	0	0%
1936	465	465	439	423	410	0	0%
1937	465	461	445	429	417	0	0%
1938	465	465	463	449	434	0	0%
1939	444	430	428	423	409	0	0%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	445	428	419	407	0	0%
1945	465	456	429	414	403	0	0%
1946	465	451	428	417	403	0	0%
1947	452	437	428	423	410	0	0%
1948	465	465	461	449	434	0	0%
1949	462	449	432	427	418	0	0%
1950	465	465	447	439	428	0	0%
1951	465	453	428	418	409	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	0	0%
1955	449	440	428	413	404	0	0%
1956	465	465	463	449	434	0	0%
1957	465	457	443	436	425	0	0%
1958	465	465	463	449	434	0	0%
1959	447	429	423	403	397	1	20%
1960	454	445	428	411	401	0	0%
1961	429	429	424	411	401	0	0%
1962	452	444	428	404	400	1	20%
1963	465	465	460	449	434	0	0%
1964	439	429	423	403	399	1	20%
1965	461	465	456	449	434	0	0%
1966	453	428	423	403	397	1	20%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	1	20%
1969	465	465	461	449	434	0	0%
1970	463	452	428	413	403	0	0%
1971	465	465	461	449	434	0	0%
1972	455	434	427	404	400	1	20%
1973	465	446	428	425	417	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	436	428	420	410	0	0%
1980	465	465	462	449	434	0	0%
1981	447	437	428	415	402	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	447	440	431	0	0%
1985	440	428	425	418	409	0	0%
1986	465	465	455	438	429	0	0%
1987	423	418	412	403	392	1	20%
1988	395	391	385	379	370	5	100%
1989	447	434	428	426	416	0	0%
1990	426	423	410	399	393	2	40%
1991	423	423	410	398	392	2	40%

38 11%
Percent Availability During Recreation Season 89%

FOLSOM RESERVOIR

Folsom Elevation (ft)
Percent Inflow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	359	354	5	100%
1925	465	440	418	402	399	1	20%
1926	442	427	411	403	398	1	20%
1927	465	465	445	436	427	0	0%
1928	451	428	417	410	402	0	0%
1929	424	424	414	398	392	2	40%
1930	450	447	431	420	407	0	0%
1931	400	397	393	387	378	5	100%
1932	465	465	454	446	434	0	0%
1933	437	440	426	417	405	0	0%
1934	432	423	411	404	396	1	20%
1935	451	453	429	408	402	0	0%
1936	465	465	439	423	410	0	0%
1937	465	461	447	431	420	0	0%
1938	465	465	463	449	434	0	0%
1939	444	431	413	408	400	1	20%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	447	424	420	409	0	0%
1945	465	457	428	413	403	0	0%
1946	465	451	428	415	403	0	0%
1947	451	430	412	407	400	1	20%
1948	465	465	452	441	430	0	0%
1949	460	445	427	423	413	0	0%
1950	465	465	448	440	429	0	0%
1951	465	455	428	414	405	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	455	436	427	410	402	0	0%
1955	447	435	416	404	400	1	20%
1956	465	465	463	449	434	0	0%
1957	465	458	434	428	419	0	0%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	1	20%
1960	453	438	416	402	396	1	20%
1961	427	427	409	401	392	1	20%
1962	452	447	428	406	400	1	20%
1963	465	465	457	449	434	0	0%
1964	439	432	416	406	400	1	20%
1965	458	463	440	434	425	0	0%
1966	446	428	423	403	397	1	20%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	0	0%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	1	20%
1973	465	446	428	423	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	3	60%
1977	349	349	344	339	335	5	100%
1978	465	465	459	449	434	0	0%
1979	465	435	428	406	400	1	20%
1980	465	465	462	449	434	0	0%
1981	447	436	420	405	397	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	435	427	420	0	0%
1985	441	427	409	401	399	1	20%
1986	465	465	451	434	425	0	0%
1987	423	416	399	388	376	3	60%
1988	392	389	383	378	370	5	100%
1989	445	427	402	383	380	2	40%
1990	413	412	406	393	387	2	40%
1991	420	423	406	395	389	2	40%

50 14%
Percent Availability During Recreation Season 86%

FOLSOM RESERVOIR

Folsom Elevation (ft)
Revised Max Flow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	440	421	413	0	0%
1924	366	363	356	349	344	5	100%
1925	465	452	424	401	399	1	20%
1926	440	433	423	416	404	0	0%
1927	465	465	445	426	418	0	0%
1928	446	431	394	379	377	3	60%
1929	409	410	405	401	395	1	20%
1930	453	449	433	423	410	0	0%
1931	400	398	384	380	372	5	100%
1932	465	458	438	427	416	0	0%
1933	406	412	407	404	399	1	20%
1934	423	403	386	377	371	3	60%
1935	431	440	426	411	403	0	0%
1936	465	465	443	425	417	0	0%
1937	465	462	445	431	423	0	0%
1938	465	465	463	449	434	0	0%
1939	436	432	425	420	407	0	0%
1940	462	455	443	435	427	0	0%
1941	465	465	450	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	457	442	431	0	0%
1944	453	448	441	427	417	0	0%
1945	464	452	426	414	404	0	0%
1946	454	435	408	395	394	2	40%
1947	449	444	435	427	416	0	0%
1948	465	465	461	449	434	0	0%
1949	465	457	447	438	428	0	0%
1950	465	465	459	449	434	0	0%
1951	465	462	453	444	434	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	439	419	384	368	371	3	60%
1955	429	420	408	405	401	0	0%
1956	465	465	463	449	434	0	0%
1957	456	447	417	409	402	0	0%
1958	465	465	463	449	434	0	0%
1959	417	396	372	360	361	4	80%
1960	439	433	409	396	396	2	40%
1961	418	410	389	382	374	3	60%
1962	403	393	372	360	360	4	80%
1963	465	465	447	430	423	0	0%
1964	444	443	428	426	417	0	0%
1965	457	462	444	429	421	0	0%
1966	423	400	372	360	360	4	80%
1967	465	465	463	449	434	0	0%
1968	428	403	372	360	363	3	60%
1969	465	465	461	449	434	0	0%
1970	463	452	428	409	401	0	0%
1971	465	465	461	449	434	0	0%
1972	428	389	372	360	360	4	80%
1973	465	457	426	413	405	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	408	374	360	354	4	80%	
1977	340	334	328	323	5	100%	
1978	465	465	459	449	434	0	0%
1979	465	459	428	418	411	0	0%
1980	465	465	462	449	434	0	0%
1981	447	438	424	409	401	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	428	418	411	0	0%
1985	447	434	414	394	394	2	40%
1986	465	465	458	441	432	0	0%
1987	402	387	372	369	361	4	80%
1988	380	377	371	357	349	5	100%
1989	447	438	419	413	404	0	0%
1990	391	380	374	360	361	5	100%
1991	410	405	400	397	391	3	60%

Percent Availability During Recreation Season

FOLSOM RESERVOIR

Folsom Elevation (ft) Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	360	355	5	100%
1925	465	439	413	391	386	2	40%
1926	435	419	405	399	393	2	40%
1927	465	465	445	436	427	0	0%
1928	451	428	417	410	402	0	0%
1929	423	423	400	391	385	3	60%
1930	453	451	436	426	414	0	0%
1931	403	401	395	389	380	3	60%
1932	465	465	459	449	434	0	0%
1933	426	429	424	419	407	0	0%
1934	425	406	399	394	385	3	60%
1935	451	453	431	410	401	0	0%
1936	465	465	448	430	419	0	0%
1937	465	461	449	433	423	0	0%
1938	465	465	463	449	434	0	0%
1939	440	418	401	391	384	2	40%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	450	433	417	402	395	1	20%
1945	465	456	428	415	403	0	0%
1946	465	451	428	414	403	0	0%
1947	446	424	405	391	386	2	40%
1948	465	465	455	447	434	0	0%
1949	465	453	442	434	424	0	0%
1950	465	465	446	438	428	0	0%
1951	465	453	430	416	407	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	451	432	423	410	402	0	0%
1955	448	431	418	405	400	1	20%
1956	465	465	463	449	434	0	0%
1957	465	457	432	428	418	0	0%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	1	20%
1960	449	436	419	400	394	2	40%
1961	427	428	421	405	397	1	20%
1962	452	453	428	405	400	1	20%
1963	465	465	452	444	433	0	0%
1964	439	424	410	394	391	2	40%
1965	458	463	440	434	425	0	0%
1966	445	428	423	403	397	1	20%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	1	20%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	1	20%
1973	465	444	428	424	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	411	403	396	391	381	3	60%
1977	346	346	341	336	332	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	428	404	400	1	20%
1980	465	465	462	449	434	0	0%
1981	447	439	424	410	400	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	430	425	419	0	0%
1985	436	423	409	394	393	2	40%
1986	465	465	455	438	430	0	0%
1987	424	412	399	391	380	3	60%
1988	393	389	384	378	370	5	100%
1989	444	429	414	406	401	0	0%
1990	403	402	399	391	385	3	60%
1991	417	412	408	403	397	1	20%

58 17%
Percent Availability During Recreation Season
83%

FOLSOM RESERVOIR

Folsom Elevation (ft) Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 400 msf?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	459	432	412	406	0	0%
1924	389	389	387	385	379	5	100%
1925	465	442	420	407	404	0	0%
1926	441	427	406	395	392	2	40%
1927	465	465	454	448	434	0	0%
1928	455	431	423	410	404	0	0%
1929	433	426	406	395	392	2	40%
1930	442	440	419	409	403	0	0%
1931	407	406	403	399	393	2	40%
1932	465	465	457	449	434	0	0%
1933	438	443	432	424	415	0	0%
1934	423	419	407	403	397	1	20%
1935	453	457	429	412	403	0	0%
1936	465	465	442	433	426	0	0%
1937	465	463	449	439	430	0	0%
1938	465	465	463	449	434	0	0%
1939	447	429	412	400	396	2	40%
1940	465	459	428	411	405	0	0%
1941	465	465	462	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	462	449	434	0	0%
1944	463	455	428	413	405	0	0%
1945	465	451	428	411	404	0	0%
1946	465	445	428	413	403	0	0%
1947	458	440	417	400	396	2	40%
1948	465	465	462	449	434	0	0%
1949	464	449	432	427	420	0	0%
1950	465	465	446	440	431	0	0%
1951	465	455	428	421	414	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	441	428	418	410	0	0%
1955	451	443	426	413	406	0	0%
1956	465	465	463	449	434	0	0%
1957	465	456	444	438	429	0	0%
1958	465	465	463	449	434	0	0%
1959	449	428	424	403	400	1	20%
1960	453	443	420	402	398	1	20%
1961	433	435	417	410	402	0	0%
1962	454	451	428	406	403	0	0%
1963	465	465	461	449	434	0	0%
1964	443	434	411	397	396	2	40%
1965	460	465	448	443	434	0	0%
1966	454	432	427	405	401	0	0%
1967	465	465	463	449	434	0	0%
1968	451	428	418	403	401	0	0%
1969	465	465	463	449	434	0	0%
1970	464	445	428	410	404	0	0%
1971	465	465	463	449	434	0	0%
1972	455	429	424	403	401	0	0%
1973	465	452	441	434	427	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	462	449	434	0	0%
1976	420	417	406	395	388	2	40%
1977	356	356	349	343	337	5	100%
1978	465	465	463	449	434	0	0%
1979	465	439	428	423	415	0	0%
1980	465	465	463	449	434	0	0%
1981	450	440	420	405	398	1	20%
1982	465	465	463	449	434	0	0%
1983	465	465	464	451	434	0	0%
1984	465	453	444	439	431	0	0%
1985	444	427	407	395	396	2	40%
1986	465	465	455	443	434	0	0%
1987	428	419	406	395	386	2	40%
1988	404	401	397	393	386	3	60%
1989	448	435	414	406	403	0	0%
1990	423	419	406	395	392	2	40%
1991	423	419	406	395	391	2	40%

39 11%
Percent Availability During Recreation Season
89%

Folsom Reservoir 360 msl Recreation Activity Threshold

C - 0 9 2 8 3 0

C-092830

FOLSOM RESERVOIR

Folsom Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1932	465	465	463	459	434	0	0%
1933	465	463	437	421	412	0	0%
1934	373	370	365	359	355	2	40%
1935	465	432	428	405	401	0	0%
1936	442	427	409	402	396	0	0%
1937	465	465	454	442	432	0	0%
1938	465	465	454	446	434	0	0%
1939	444	431	412	406	399	0	0%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	452	425	421	409	0	0%
1945	465	457	428	414	403	0	0%
1946	465	453	428	415	403	0	0%
1947	453	434	417	411	402	0	0%
1948	465	465	458	445	434	0	0%
1949	460	448	429	423	413	0	0%
1950	465	465	447	439	429	0	0%
1951	465	455	428	420	412	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	0	0%
1955	449	439	423	409	402	0	0%
1956	465	465	463	449	434	0	0%
1957	465	456	440	432	423	0	0%
1958	465	455	463	449	434	0	0%
1959	447	429	424	403	397	0	0%
1960	454	442	420	403	397	0	0%
1961	427	428	409	401	393	0	0%
1962	452	447	428	406	400	0	0%
1963	465	465	460	449	434	0	0%
1964	443	432	413	401	398	0	0%
1965	460	464	446	440	431	0	0%
1966	453	436	428	404	398	0	0%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	0	0%
1969	465	465	463	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	0	0%
1973	465	449	429	425	418	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	0	0%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	459	443	436	427	0	0%
1980	465	465	462	449	434	0	0%
1981	447	435	420	406	398	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	428	414	404	0	0%
1985	441	426	407	396	395	0	0%
1986	465	465	449	432	424	0	0%
1987	420	415	399	385	373	0	0%
1988	392	388	383	377	370	0	0%
1989	447	432	409	389	386	0	0%
1990	414	406	395	389	389	0	0%
1991	417	421	406	395	389	7	2%
							98%
							Percent Availability During Recreation Season

FOLSOM RESERVOIR

Folsom Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	364	358	353	2	40%
1925	465	441	428	416	406	0	0%
1926	444	429	423	416	404	0	0%
1927	465	465	458	449	434	0	0%
1928	457	431	421	410	402	0	0%
1929	423	423	410	398	392	0	0%
1930	453	443	428	417	404	0	0%
1931	397	395	391	385	376	0	0%
1932	465	463	447	439	428	0	0%
1933	435	427	410	401	396	0	0%
1934	431	423	410	403	395	0	0%
1935	451	453	429	408	402	0	0%
1936	465	465	439	423	410	0	0%
1937	465	461	445	429	417	0	0%
1938	465	465	463	449	434	0	0%
1939	444	430	428	423	409	0	0%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	445	428	419	407	0	0%
1945	465	456	429	414	403	0	0%
1946	465	451	428	417	403	0	0%
1947	452	437	428	423	410	0	0%
1948	465	465	461	449	434	0	0%
1949	462	449	432	427	418	0	0%
1950	465	465	447	439	428	0	0%
1951	465	453	428	418	409	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	438	428	410	402	0	0%
1955	449	440	428	413	404	0	0%
1956	465	465	463	449	434	0	0%
1957	465	457	443	436	425	0	0%
1958	465	465	463	449	434	0	0%
1959	447	429	423	403	397	0	0%
1960	454	445	428	411	401	0	0%
1961	429	429	424	411	401	0	0%
1962	452	444	428	404	400	0	0%
1963	465	465	460	449	434	0	0%
1964	439	429	423	403	399	0	0%
1965	461	465	456	449	434	0	0%
1966	453	428	423	403	397	0	0%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	0	0%
1969	465	465	461	449	434	0	0%
1970	463	452	428	413	403	0	0%
1971	465	465	461	449	434	0	0%
1972	455	434	427	404	400	0	0%
1973	465	446	428	425	417	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	0	0%
1977	349	349	344	339	335	5	100%
1978	465	465	461	449	434	0	0%
1979	465	436	428	420	410	0	0%
1980	465	465	462	449	434	0	0%
1981	447	437	428	415	402	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	447	440	431	0	0%
1985	440	428	425	418	409	0	0%
1986	465	465	455	438	429	0	0%
1987	423	418	412	403	392	0	0%
1988	395	391	385	379	370	0	0%
1989	447	434	428	426	416	0	0%
1990	426	423	410	399	393	0	0%
1991	423	423	410	398	392	0	0%

Percent Availability During Recreation Season

7 2%
98%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	359	354	2	40%
1925	465	440	418	402	399	0	0%
1926	442	427	411	403	398	0	0%
1927	465	465	445	436	427	0	0%
1928	451	428	417	410	402	0	0%
1929	424	424	414	398	392	0	0%
1930	450	447	431	420	407	0	0%
1931	400	397	393	387	378	0	0%
1932	465	465	454	446	434	0	0%
1933	437	440	426	417	405	0	0%
1934	432	423	411	404	396	0	0%
1935	451	453	429	408	402	0	0%
1936	465	465	439	423	410	0	0%
1937	465	461	447	431	420	0	0%
1938	465	465	463	449	434	0	0%
1939	444	431	413	408	400	0	0%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	458	447	424	420	409	0	0%
1945	465	457	428	413	403	0	0%
1946	465	451	428	415	403	0	0%
1947	451	430	412	407	400	0	0%
1948	465	465	452	441	430	0	0%
1949	460	445	427	423	413	0	0%
1950	465	465	448	440	429	0	0%
1951	465	455	428	414	405	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	455	436	427	410	402	0	0%
1955	447	435	416	404	400	0	0%
1956	465	465	463	449	434	0	0%
1957	465	458	434	428	419	0	0%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	0	0%
1960	453	438	416	402	396	0	0%
1961	427	427	409	401	392	0	0%
1962	452	447	428	406	400	0	0%
1963	465	465	457	449	434	0	0%
1964	439	432	416	406	400	0	0%
1965	458	463	440	434	425	0	0%
1966	446	428	423	403	397	0	0%
1967	465	465	463	449	434	0	0%
1968	448	433	421	408	401	0	0%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	0	0%
1973	465	446	428	423	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	412	407	400	395	385	0	0%
1977	349	349	344	339	335	5	100%
1978	465	465	459	449	434	0	0%
1979	465	435	428	406	400	0	0%
1980	465	465	462	449	434	0	0%
1981	447	436	420	405	397	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	435	427	420	0	0%
1985	441	427	409	401	399	0	0%
1986	465	465	451	434	425	0	0%
1987	423	416	399	388	376	0	0%
1988	392	389	383	378	370	0	0%
1989	445	427	402	383	380	0	0%
1990	413	412	406	393	387	0	0%
1991	420	423	406	395	389	0	0%

7 2%
Percent Availability During Recreation Season
98%

FOLSOM RESERVOIR

**Folsom Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	440	421	413	0	0%
1924	366	363	356	349	344	3	60%
1925	465	452	424	401	399	0	0%
1926	440	433	423	416	404	0	0%
1927	465	465	445	426	418	0	0%
1928	446	431	394	379	377	0	0%
1929	409	410	405	401	395	0	0%
1930	453	449	433	423	410	0	0%
1931	400	398	384	380	372	0	0%
1932	465	465	458	438	427	0	0%
1933	406	412	407	404	399	0	0%
1934	423	403	386	377	371	0	0%
1935	431	440	426	411	403	0	0%
1936	465	465	443	425	417	0	0%
1937	465	462	445	431	423	0	0%
1938	465	465	463	449	434	0	0%
1939	436	432	425	420	407	0	0%
1940	462	455	443	435	425	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	457	442	431	0	0%
1944	453	448	441	427	417	0	0%
1945	464	452	426	414	404	0	0%
1946	454	435	408	395	394	0	0%
1947	449	444	435	427	416	0	0%
1948	465	465	461	449	434	0	0%
1949	465	457	447	438	428	0	0%
1950	465	465	459	449	434	0	0%
1951	465	462	453	444	434	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	439	419	384	368	371	0	0%
1955	429	420	408	405	401	0	0%
1956	465	465	463	449	434	0	0%
1957	456	447	417	409	402	0	0%
1958	465	465	463	449	434	0	0%
1959	417	396	372	360	361	1	20%
1960	439	433	409	396	390	0	0%
1961	418	410	389	382	374	0	0%
1962	403	393	372	360	363	1	20%
1963	465	465	447	430	423	0	0%
1964	444	443	428	426	417	0	0%
1965	457	462	444	429	421	0	0%
1966	423	400	372	360	360	2	40%
1967	465	465	463	449	434	0	0%
1968	428	403	372	360	363	1	20%
1969	465	465	461	449	434	0	0%
1970	463	452	428	409	401	0	0%
1971	465	465	461	449	434	0	0%
1972	428	389	372	360	365	1	20%
1973	465	457	426	413	405	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	408	380	374	360	354	2	40%
1977	340	340	334	328	323	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	402	374	373	0	0%
1980	465	465	462	449	434	0	0%
1981	447	438	424	409	400	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	428	418	411	0	0%
1985	447	434	414	394	394	0	0%
1986	465	465	458	441	432	0	0%
1987	402	387	372	369	361	0	0%
1988	380	377	371	357	349	2	40%
1989	447	438	419	413	404	0	0%
1990	391	380	374	360	361	1	20%
1991	410	405	400	397	391	0	0%

19 5%
Percent Availability During Recreation Season
95%

FOLSOM RESERVOIR

Folsom Elevation (ft) Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	464	437	421	412	0	0%
1924	373	370	365	360	355	2	40%
1925	465	439	413	391	386	0	0%
1926	435	419	405	399	393	0	0%
1927	465	465	445	436	427	0	0%
1928	451	428	417	410	402	0	0%
1929	423	423	400	391	385	0	0%
1930	453	451	436	426	414	0	0%
1931	403	401	395	389	380	0	0%
1932	465	465	459	449	434	0	0%
1933	426	429	424	419	407	0	0%
1934	425	406	399	394	385	0	0%
1935	451	453	431	410	401	0	0%
1936	465	465	448	430	419	0	0%
1937	465	461	449	433	423	0	0%
1938	465	465	463	449	434	0	0%
1939	440	418	401	391	384	0	0%
1940	465	457	428	410	403	0	0%
1941	465	465	460	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	460	449	434	0	0%
1944	450	433	417	402	395	0	0%
1945	465	456	428	415	403	0	0%
1946	465	451	428	414	403	0	0%
1947	446	424	405	391	386	0	0%
1948	465	465	455	447	434	0	0%
1949	465	453	442	434	424	0	0%
1950	465	465	446	438	428	0	0%
1951	465	453	430	416	407	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	451	432	423	410	402	0	0%
1955	448	431	418	405	400	0	0%
1956	465	465	463	449	434	0	0%
1957	465	457	432	428	418	0	0%
1958	465	465	463	449	434	0	0%
1959	447	430	424	403	397	0	0%
1960	449	436	419	400	394	0	0%
1961	427	428	421	405	397	0	0%
1962	452	453	428	405	400	0	0%
1963	465	465	452	444	433	0	0%
1964	439	424	410	394	391	0	0%
1965	458	463	440	434	425	0	0%
1966	445	428	423	403	397	0	0%
1967	465	465	463	449	434	0	0%
1968	448	428	416	403	399	0	0%
1969	465	465	461	449	434	0	0%
1970	463	452	428	410	402	0	0%
1971	465	465	461	449	434	0	0%
1972	455	432	425	404	400	0	0%
1973	465	444	428	424	416	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	461	449	434	0	0%
1976	411	403	396	391	381	0	0%
1977	346	346	341	336	332	5	100%
1978	465	465	459	449	434	0	0%
1979	465	434	428	404	400	0	0%
1980	465	465	462	449	434	0	0%
1981	447	439	424	410	400	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	463	449	434	0	0%
1984	465	459	430	425	419	0	0%
1985	436	423	409	394	393	0	0%
1986	465	465	455	438	430	0	0%
1987	424	412	399	391	380	0	0%
1988	393	389	384	378	370	0	0%
1989	444	429	414	406	401	0	0%
1990	403	402	399	391	385	0	0%
1991	417	412	408	403	397	0	0%

7 2%
Percent Availability During Recreation Season 98%

FOLSOM RESERVOIR

Folsom Elevation (ft) Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	465	465	463	449	434	0	0%
1923	465	459	432	412	406	0	0%
1924	389	389	387	385	379	0	0%
1925	465	442	420	407	404	0	0%
1926	441	427	406	395	392	0	0%
1927	465	465	454	448	434	0	0%
1928	455	431	423	410	404	0	0%
1929	433	426	406	395	392	0	0%
1930	442	440	419	409	403	0	0%
1931	407	406	403	399	393	0	0%
1932	465	465	457	449	434	0	0%
1933	438	443	432	424	415	0	0%
1934	423	419	407	403	397	0	0%
1935	453	457	429	412	403	0	0%
1936	465	465	442	433	426	0	0%
1937	465	463	449	439	430	0	0%
1938	465	465	463	449	434	0	0%
1939	447	429	412	400	396	0	0%
1940	465	459	428	411	405	0	0%
1941	465	465	462	449	434	0	0%
1942	465	465	463	449	434	0	0%
1943	465	465	462	449	434	0	0%
1944	463	455	428	413	405	0	0%
1945	465	451	428	411	404	0	0%
1946	465	445	428	413	403	0	0%
1947	458	440	417	400	396	0	0%
1948	465	465	462	449	434	0	0%
1949	464	449	432	427	420	0	0%
1950	465	465	446	440	431	0	0%
1951	465	455	428	421	414	0	0%
1952	465	465	463	449	434	0	0%
1953	465	465	463	449	434	0	0%
1954	456	441	428	418	410	0	0%
1955	451	443	426	413	406	0	0%
1956	465	465	463	449	434	0	0%
1957	465	456	444	438	429	0	0%
1958	465	465	463	449	434	0	0%
1959	449	428	424	403	400	0	0%
1960	453	443	420	402	398	0	0%
1961	433	435	417	410	402	0	0%
1962	454	451	428	406	403	0	0%
1963	465	465	461	449	434	0	0%
1964	443	434	411	397	396	0	0%
1965	460	465	448	443	434	0	0%
1966	454	432	427	405	401	0	0%
1967	465	465	463	449	434	0	0%
1968	451	428	418	403	401	0	0%
1969	465	465	463	449	434	0	0%
1970	464	445	428	410	404	0	0%
1971	465	465	463	449	434	0	0%
1972	455	429	424	403	401	0	0%
1973	465	452	441	434	427	0	0%
1974	465	465	463	449	434	0	0%
1975	465	465	462	449	434	0	0%
1976	420	417	406	395	388	0	0%
1977	356	356	349	343	337	5	100%
1978	465	465	463	449	434	0	0%
1979	465	439	428	423	415	0	0%
1980	465	465	463	449	434	0	0%
1981	450	440	420	405	398	0	0%
1982	465	465	463	449	434	0	0%
1983	465	465	464	451	434	0	0%
1984	465	453	444	439	431	0	0%
1985	444	427	407	395	396	0	0%
1986	465	465	455	443	434	0	0%
1987	428	419	406	395	386	0	0%
1988	404	401	397	393	386	0	0%
1989	448	435	414	406	403	0	0%
1990	423	419	406	395	392	0	0%
1991	423	419	406	395	391	0	0%

Percent Availability During Recreation Season

5 1%
99%

WHISKEYTOWN
RESERVOIR DATA

C - 0 9 2 8 3 7

C-092837

Whiskeytown Reservoir 1198 msl
Recreation Activity Threshold

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 100%

WHISKEYTOWN RESERVOIR

**Whiskeytown Elevation (ft)
Percent Inflow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

**Whiskeytown Elevation (ft)
Revised Max Flow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	1	20%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1209	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1208	1207	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1208	1208	0	0%
1955	1209	1209	1209	1207	1206	0	0%
1956	1209	1209	1209	1208	1207	0	0%
1957	1209	1209	1209	1208	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1208	1207	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1206	1205	1203	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1208	1207	1205	0	0%
1967	1209	1209	1209	1208	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1209	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1208	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

Percent Availability During Recreation Season

1 0%
 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Oak Bottom Marina threshold of 1198?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	1	20%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1209	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1208	1207	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1208	1208	0	0%
1955	1209	1209	1209	1207	1206	0	0%
1956	1209	1209	1209	1208	1207	0	0%
1957	1205	1209	1209	1208	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1208	1207	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1206	1205	1203	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1208	1207	1205	0	0%
1967	1209	1209	1209	1208	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1209	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1208	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

1 0%
Percent Availability During Recreation Season 100%

Whiskeytown Reservoir 1195 msl
Recreation Activity Threshold

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season	
							0%	0%
1922	1209	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season

100%

C - 0 9 2 8 4 6

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season

0%

100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season

100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Revised Max Flow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	0	0%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1209	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1208	1207	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1208	1208	0	0%
1955	1209	1209	1209	1207	1206	0	0%
1956	1209	1209	1209	1208	1207	0	0%
1957	1209	1209	1209	1208	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1208	1207	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1206	1205	1203	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1208	1207	1205	0	0%
1967	1209	1209	1209	1208	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1209	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1208	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Existing Conditions

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Whiskey Creek/Bottom Ramps threshold of 1195?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	0	0%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1209	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1208	1207	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1208	1208	0	0%
1955	1209	1209	1209	1207	1206	0	0%
1956	1209	1209	1209	1208	1207	0	0%
1957	1209	1209	1209	1208	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1208	1207	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1206	1205	1203	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1208	1207	1205	0	0%
1967	1209	1209	1209	1208	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1209	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1208	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

Percent Availability During Recreation Season

0%
100%

Whiskeytown Reservoir 1190 msl
Recreation Activity Threshold

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
No Action

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months		% of Season
						Below	Above	
1922	1209	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season

100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) State Permit Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft)
Percent Inflow Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

**Whiskeytown Elevation (ft)
Revised Max Flow Alternative**

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	0	0%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1209	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1208	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1208	1207	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1208	1208	0	0%
1955	1209	1209	1209	1207	1206	0	0%
1956	1209	1209	1209	1208	1207	0	0%
1957	1209	1209	1209	1208	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1208	1207	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1206	1205	1203	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1208	1207	1205	0	0%
1967	1209	1209	1209	1208	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1209	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1208	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

Percent Availability During Recreation Season 0% 100%

WHISKEYTOWN RESERVOIR

Whiskeytown Elevation (ft) Flow Evaluation Study Alternative

On average, how many of these months (recreation season May - Sept.) does the reservoir drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1209	1209	1208	0	0%
1923	1209	1209	1209	1209	1208	0	0%
1924	1209	1209	1209	1209	1208	0	0%
1925	1209	1209	1209	1209	1208	0	0%
1926	1209	1209	1209	1209	1208	0	0%
1927	1209	1209	1209	1209	1208	0	0%
1928	1209	1209	1209	1209	1208	0	0%
1929	1209	1209	1209	1209	1208	0	0%
1930	1209	1209	1209	1209	1208	0	0%
1931	1209	1209	1209	1209	1208	0	0%
1932	1209	1209	1209	1209	1208	0	0%
1933	1209	1209	1209	1209	1208	0	0%
1934	1209	1209	1209	1209	1208	0	0%
1935	1209	1209	1209	1209	1208	0	0%
1936	1209	1209	1209	1209	1208	0	0%
1937	1209	1209	1209	1209	1208	0	0%
1938	1209	1209	1209	1209	1208	0	0%
1939	1209	1209	1209	1209	1208	0	0%
1940	1209	1209	1209	1209	1208	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1209	1209	1209	1209	1208	0	0%
1944	1209	1209	1209	1209	1208	0	0%
1945	1209	1209	1209	1209	1208	0	0%
1946	1209	1209	1209	1209	1208	0	0%
1947	1209	1209	1209	1209	1208	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1209	1209	1209	1208	0	0%
1951	1209	1209	1209	1209	1208	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1208	0	0%
1959	1209	1209	1209	1209	1208	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1209	1208	0	0%
1962	1209	1209	1209	1209	1208	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1209	1209	1209	1208	0	0%
1965	1209	1209	1209	1209	1208	0	0%
1966	1209	1209	1209	1209	1208	0	0%
1967	1209	1209	1209	1209	1208	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1209	1209	1209	1209	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1209	1209	1209	1209	1208	0	0%
1985	1209	1209	1209	1209	1208	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1209	1209	1209	1209	1208	0	0%
1988	1209	1209	1209	1209	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1209	1209	1209	1209	1208	0	0%

Percent Availability During Recreation Season

100%

WHISKEYTOWN RESERVOIR

**Whiskeytown Elevation (ft)
Existing Conditions**

On average, how many of these months (recreation season May - Sept.) does the reservoir A37 drop below the Brandy Creek Ramp threshold of 1190?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	1209	1209	1208	1207	1206	0	0%
1923	1208	1207	1206	1205	1204	0	0%
1924	1204	1203	1201	1199	1198	0	0%
1925	1209	1209	1209	1207	1207	0	0%
1926	1209	1208	1207	1206	1204	0	0%
1927	1209	1209	1209	1208	1207	0	0%
1928	1209	1209	1208	1206	1205	0	0%
1929	1206	1206	1205	1203	1202	0	0%
1930	1206	1206	1204	1203	1202	0	0%
1931	1205	1204	1203	1202	1200	0	0%
1932	1208	1208	1207	1205	1204	0	0%
1933	1208	1209	1209	1207	1206	0	0%
1934	1205	1204	1203	1201	1200	0	0%
1935	1209	1209	1208	1207	1206	0	0%
1936	1209	1209	1209	1207	1206	0	0%
1937	1209	1209	1208	1208	1207	0	0%
1938	1209	1209	1209	1208	1207	0	0%
1939	1205	1204	1203	1201	1200	0	0%
1940	1209	1209	1208	1207	1206	0	0%
1941	1209	1209	1209	1209	1208	0	0%
1942	1209	1209	1209	1209	1208	0	0%
1943	1208	1209	1208	1207	1206	0	0%
1944	1204	1204	1204	1202	1201	0	0%
1945	1208	1209	1208	1207	1206	0	0%
1946	1209	1209	1208	1207	1206	0	0%
1947	1205	1206	1206	1205	1204	0	0%
1948	1209	1209	1209	1209	1208	0	0%
1949	1209	1209	1209	1209	1208	0	0%
1950	1209	1208	1207	1206	1205	0	0%
1951	1209	1209	1208	1207	1206	0	0%
1952	1209	1209	1209	1209	1208	0	0%
1953	1209	1209	1209	1209	1208	0	0%
1954	1209	1209	1209	1209	1208	0	0%
1955	1209	1209	1209	1209	1208	0	0%
1956	1209	1209	1209	1209	1208	0	0%
1957	1209	1209	1209	1209	1208	0	0%
1958	1209	1209	1209	1209	1209	0	0%
1959	1208	1207	1206	1205	1205	0	0%
1960	1209	1209	1209	1209	1208	0	0%
1961	1209	1209	1209	1208	1207	0	0%
1962	1209	1209	1208	1207	1206	0	0%
1963	1209	1209	1209	1209	1208	0	0%
1964	1209	1208	1208	1206	1205	0	0%
1965	1209	1209	1208	1207	1205	0	0%
1966	1209	1209	1209	1208	1207	0	0%
1967	1209	1209	1209	1208	1207	0	0%
1968	1209	1209	1209	1209	1208	0	0%
1969	1209	1209	1209	1209	1208	0	0%
1970	1209	1209	1209	1209	1208	0	0%
1971	1209	1209	1209	1209	1208	0	0%
1972	1209	1209	1209	1209	1208	0	0%
1973	1209	1209	1209	1209	1208	0	0%
1974	1209	1209	1209	1209	1208	0	0%
1975	1209	1209	1209	1209	1208	0	0%
1976	1209	1209	1209	1209	1208	0	0%
1977	1203	1204	1207	1208	1208	0	0%
1978	1209	1209	1209	1209	1208	0	0%
1979	1209	1209	1209	1209	1208	0	0%
1980	1209	1209	1209	1209	1208	0	0%
1981	1209	1209	1209	1209	1208	0	0%
1982	1209	1209	1209	1209	1208	0	0%
1983	1209	1209	1209	1209	1208	0	0%
1984	1208	1208	1208	1207	1206	0	0%
1985	1205	1205	1204	1203	1203	0	0%
1986	1209	1209	1209	1209	1208	0	0%
1987	1205	1204	1204	1202	1202	0	0%
1988	1208	1209	1208	1208	1208	0	0%
1989	1209	1209	1209	1209	1208	0	0%
1990	1209	1209	1209	1209	1208	0	0%
1991	1207	1205	1204	1203	1203	0	0%

Percent Availability During Recreation Season

100%

**OROVILLE RESERVOIR
DATA**

C - 0 9 2 8 5 9

C-092859

Oroville Reservoir 840 msl Recreation Activity Threshold

OROVILLE RESERVOIR

Oroville Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	849	841	0	0%
1923	900	883	841	795	774	2	40%
1924	695	679	656	641	634	5	100%
1925	803	794	750	710	672	5	100%
1926	792	772	739	717	690	5	100%
1927	900	900	876	835	813	2	40%
1928	862	850	822	779	748	3	60%
1929	731	722	700	685	670	5	100%
1930	854	838	802	771	741	4	80%
1931	705	691	665	647	641	5	100%
1932	795	789	759	735	708	5	100%
1933	711	707	690	677	672	5	100%
1934	731	713	691	675	668	5	100%
1935	850	847	816	765	728	3	60%
1936	882	863	853	808	777	2	40%
1937	825	812	777	716	668	5	100%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	3	60%
1940	883	874	845	804	781	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	864	886	877	0	0%
1943	889	892	870	892	816	2	40%
1944	852	832	794	763	729	4	80%
1945	859	838	801	748	708	4	80%
1946	860	835	797	747	712	4	80%
1947	766	759	736	722	706	5	100%
1948	872	878	838	804	787	3	60%
1949	817	796	760	733	702	5	100%
1950	849	843	806	770	754	3	60%
1951	900	890	856	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	883	877	0	0%
1954	866	857	823	781	758	3	60%
1955	816	799	768	746	724	5	100%
1956	900	900	894	886	877	0	0%
1957	881	869	840	800	781	3	60%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	4	80%
1960	803	792	759	733	709	5	100%
1961	791	783	761	745	728	5	100%
1962	813	801	774	724	694	5	100%
1963	900	900	875	841	834	1	20%
1964	862	850	821	802	782	3	60%
1965	883	885	875	852	847	0	0%
1966	870	847	824	783	758	3	60%
1967	900	900	894	886	877	0	0%
1968	854	830	798	755	724	4	80%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	3	60%
1971	900	900	892	875	865	0	0%
1972	870	846	812	771	747	3	60%
1973	900	886	854	818	792	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	820	806	789	3	60%
1977	697	680	660	650	651	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	3	60%
1980	893	889	882	868	866	0	0%
1981	872	860	836	814	793	3	60%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	832	822	2	40%
1985	870	851	824	804	791	3	60%
1986	875	872	857	818	819	2	40%
1987	807	788	766	747	742	5	100%
1988	810	798	774	761	747	5	100%
1989	868	853	827	812	812	3	60%
1990	816	798	764	745	724	5	100%
1991	733	711	680	668	650	5	100%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
State Permit Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	2	40%
1924	899	682	659	644	637	5	100%
1925	804	795	752	712	674	5	100%
1926	796	779	749	730	708	5	100%
1927	900	900	876	835	818	2	40%
1928	862	850	822	780	749	3	60%
1929	731	720	690	674	657	5	100%
1930	847	835	801	772	743	4	80%
1931	708	694	669	650	644	5	100%
1932	797	791	761	737	710	5	100%
1933	710	706	688	675	669	5	100%
1934	726	708	685	669	654	5	100%
1935	842	838	807	753	714	4	80%
1936	874	875	844	799	767	2	40%
1937	818	805	768	705	655	5	100%
1938	900	900	894	886	877	0	0%
1939	866	854	828	808	786	3	60%
1940	883	876	846	806	783	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	871	834	818	2	40%
1944	861	843	808	781	751	3	60%
1945	871	850	820	771	735	3	60%
1946	875	851	803	751	714	3	60%
1947	775	767	738	720	700	5	100%
1948	864	871	830	791	777	3	60%
1949	810	792	758	735	712	5	100%
1950	858	853	819	785	769	3	60%
1951	900	890	855	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	884	877	0	0%
1954	866	859	826	784	761	3	60%
1955	818	801	770	749	727	5	100%
1956	900	900	894	886	877	0	0%
1957	881	869	841	803	785	2	40%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	749	4	80%
1960	803	792	758	732	707	5	100%
1961	795	787	765	749	733	5	100%
1962	817	809	777	725	692	5	100%
1963	900	900	881	851	846	0	0%
1964	866	856	830	812	795	3	60%
1965	883	885	875	855	855	0	0%
1966	870	856	832	793	768	3	60%
1967	900	900	894	886	877	0	0%
1968	854	833	806	766	739	4	80%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	3	60%
1971	900	900	894	877	872	0	0%
1972	870	846	819	778	755	3	60%
1973	900	889	858	818	793	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	819	805	788	3	60%
1977	701	684	664	655	656	5	100%
1978	897	896	884	859	866	0	0%
1979	896	871	842	800	768	2	40%
1980	893	889	882	871	869	0	0%
1981	872	860	843	823	806	2	40%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	834	825	2	40%
1985	876	859	834	817	806	3	60%
1986	875	872	856	817	819	2	40%
1987	807	788	766	748	742	5	100%
1988	812	797	767	754	735	5	100%
1989	869	855	832	820	822	3	60%
1990	836	821	791	777	760	5	100%
1991	758	733	690	667	638	5	100%

185

53%
47%

Percent Availability During Recreation Season

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	843	0	0%
1923	900	883	841	795	774	2	40%
1924	698	681	658	643	637	5	100%
1925	804	795	751	711	674	5	100%
1926	793	773	741	719	693	5	100%
1927	900	900	876	835	812	2	40%
1928	862	850	822	779	747	3	60%
1929	730	722	700	685	670	5	100%
1930	854	839	802	771	741	4	80%
1931	705	691	666	648	642	5	100%
1932	795	790	760	736	708	5	100%
1933	712	707	690	677	672	5	100%
1934	731	713	691	674	668	5	100%
1935	849	847	816	765	728	3	60%
1936	882	883	853	808	778	2	40%
1937	825	814	779	718	671	5	100%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	3	60%
1940	883	874	845	804	781	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	889	868	832	816	2	40%
1944	850	829	791	760	726	4	80%
1945	857	835	800	747	707	4	80%
1946	859	834	797	747	711	4	80%
1947	765	758	736	721	706	5	100%
1948	872	878	838	796	778	3	60%
1949	812	793	759	736	712	5	100%
1950	857	852	806	767	748	3	60%
1951	900	889	855	812	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	879	874	0	0%
1954	866	856	822	780	757	3	60%
1955	815	801	774	756	741	5	100%
1956	900	900	894	886	877	0	0%
1957	880	864	835	795	774	3	60%
1958	900	900	894	886	877	0	0%
1959	854	832	806	761	747	4	80%
1960	802	792	759	735	711	5	100%
1961	791	783	761	745	729	5	100%
1962	813	802	774	725	695	5	100%
1963	900	900	874	840	831	2	40%
1964	855	843	815	795	775	3	60%
1965	883	885	875	854	848	0	0%
1966	869	846	820	779	753	3	60%
1967	900	900	894	886	877	0	0%
1968	854	830	798	754	723	4	80%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	3	60%
1971	900	900	887	866	854	0	0%
1972	869	846	806	763	739	3	60%
1973	900	885	853	813	787	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	817	803	787	3	60%
1977	691	673	652	643	644	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	3	60%
1980	893	889	880	864	863	0	0%
1981	872	860	836	815	792	3	60%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	833	822	2	40%
1985	870	851	824	805	792	3	60%
1986	875	872	857	818	819	2	40%
1987	807	788	766	748	743	5	100%
1988	810	798	774	761	747	5	100%
1989	868	853	827	812	812	3	60%
1990	816	798	765	747	726	5	100%
1991	734	712	681	669	651	5	100%

192

55%

Percent Availability During Recreation Season

45%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
	1922	900	879	836	790	1	20%
1923	900	879	836	790	769	3	60%
1924	896	679	656	641	634	5	100%
1925	802	764	755	721	687	5	100%
1926	800	782	751	731	708	5	100%
1927	900	900	876	835	811	2	40%
1928	863	851	822	782	753	3	60%
1929	735	727	708	695	684	5	100%
1930	860	846	811	781	753	3	60%
1931	717	704	680	663	658	5	100%
1932	805	801	771	743	710	5	100%
1933	699	695	678	665	660	5	100%
1934	723	705	683	667	660	5	100%
1935	847	846	821	773	740	3	60%
1936	892	891	860	818	790	2	40%
1937	831	816	780	720	671	5	100%
1938	900	900	894	886	877	0	0%
1939	867	853	825	803	778	3	60%
1940	882	874	845	805	785	2	40%
1941	900	900	893	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	886	889	868	827	806	2	40%
1944	834	815	781	751	719	5	100%
1945	851	829	791	736	697	4	80%
1946	950	922	794	747	718	4	80%
1947	773	766	741	725	708	5	100%
1948	868	874	835	794	781	3	60%
1949	876	798	765	741	717	5	100%
1950	853	843	807	769	759	3	60%
1951	900	888	855	813	794	2	40%
1952	900	882	844	806	877	0	0%
1953	900	900	889	859	845	0	0%
1954	865	850	818	779	761	3	60%
1955	879	809	785	770	759	5	100%
1956	900	900	894	872	875	0	0%
1957	881	871	840	796	776	3	60%
1958	900	900	894	886	877	0	0%
1959	856	836	809	767	754	4	80%
1960	807	797	767	744	726	5	100%
1961	807	800	783	766	751	5	100%
1962	823	812	781	732	705	5	100%
1963	900	874	835	819	812	2	40%
1964	837	826	797	777	758	5	100%
1965	883	885	875	842	835	1	20%
1966	870	847	823	783	761	3	60%
1967	900	894	886	877	877	0	0%
1968	852	830	797	755	727	4	80%
1969	900	900	894	886	875	0	0%
1970	876	857	824	778	751	3	60%
1971	900	900	881	853	840	1	20%
1972	870	847	806	767	749	3	60%
1973	900	885	854	813	790	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	885	877	0	0%
1976	862	847	819	809	795	3	60%
1977	703	685	666	656	657	5	100%
1978	897	877	848	811	799	2	40%
1979	896	867	841	801	775	2	40%
1980	893	889	881	852	850	0	0%
1981	872	861	836	816	797	3	60%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	848	811	799	2	40%
1985	852	834	809	792	781	4	80%
1986	875	872	856	817	820	2	40%
1987	813	794	773	755	750	5	100%
1988	817	804	778	766	749	5	100%
1989	867	853	829	816	818	3	60%
1990	828	812	781	766	747	5	100%
1991	750	728	698	685	667	5	100%

Percent Availability During Recreation Season

198
43%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Flow Evaluation Study Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
	900	900	883	841	795	774	0
1922	900	883	841	795	745	5	40%
1923	900	883	841	795	745	5	100%
1924	869	863	860	645	639	5	100%
1925	806	797	753	714	677	5	100%
1926	795	775	744	723	697	5	100%
1927	900	900	876	835	813	2	40%
1928	892	850	822	779	748	3	60%
1929	792	724	704	690	676	3	100%
1930	857	842	806	777	748	3	60%
1931	716	703	679	652	656	5	100%
1932	804	800	770	745	714	5	100%
1933	704	700	683	671	665	5	100%
1934	727	708	687	671	664	5	100%
1935	847	845	814	762	725	3	40%
1936	880	881	851	806	775	2	0%
1937	823	811	775	713	666	5	100%
1938	900	900	894	886	877	0	0%
1939	867	852	823	798	772	3	60%
1940	882	874	845	804	781	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	890	868	832	816	2	40%
1944	847	827	800	758	723	4	80%
1945	855	833	791	735	694	4	80%
1946	852	826	797	749	716	4	80%
1947	772	765	740	724	704	5	100%
1948	866	873	832	790	774	3	60%
1949	808	793	760	743	721	5	100%
1950	863	858	825	791	776	3	60%
1951	900	889	856	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	874	863	0	0%
1954	866	856	823	780	757	3	60%
1955	816	802	775	758	742	5	100%
1956	900	900	894	886	877	0	0%
1957	881	868	839	798	778	3	60%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	4	80%
1960	805	794	762	738	714	5	100%
1961	797	790	769	754	739	5	100%
1962	819	803	773	720	687	5	100%
1963	900	890	874	840	827	2	40%
1964	852	841	812	792	770	3	60%
1965	883	885	875	854	848	0	0%
1966	870	846	822	781	755	3	60%
1967	900	900	894	886	877	0	0%
1968	854	833	805	766	739	4	80%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	3	60%
1971	900	900	888	867	854	0	0%
1972	870	846	813	774	753	3	60%
1973	900	885	854	813	787	2	40%
1974	900	900	894	886	877	0	0%
1975	875	851	825	805	792	3	60%
1976	862	849	818	805	787	3	60%
1977	863	664	643	632	638	5	100%
1978	897	896	884	855	863	0	0%
1979	896	867	839	797	764	3	60%
1980	893	889	877	861	860	0	0%
1981	872	860	838	816	796	3	60%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	831	820	2	40%
1985	870	851	825	805	792	3	60%
1986	875	872	856	817	819	2	40%
1987	809	790	768	750	745	5	100%
1988	815	799	770	758	741	5	100%
1989	864	850	825	811	811	3	60%
1990	816	798	763	745	723	5	100%
1991	728	706	676	644	646	5	55%
						191	55%
						45%	100%

Percent Availability During Recreation Season

OROVILLE RESERVOIR

Oroville Elevation (ft)
Existing Conditions

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 840 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	893	886	877	0	0%
1923	900	895	879	847	835	1	20%
1924	777	759	734	723	710	5	100%
1925	824	813	773	741	706	5	100%
1926	819	799	767	746	723	5	100%
1927	900	900	891	874	871	0	0%
1928	863	853	831	794	769	3	60%
1929	751	740	708	693	671	5	100%
1930	854	833	799	771	745	4	80%
1931	707	694	670	652	648	5	100%
1932	799	794	764	741	715	5	100%
1933	714	711	693	682	678	5	100%
1934	734	716	696	680	660	5	100%
1935	847	848	833	797	777	3	60%
1936	897	898	886	867	853	0	0%
1937	897	895	883	858	845	0	0%
1938	900	900	894	886	877	0	0%
1939	866	848	815	787	759	3	60%
1940	884	879	855	819	801	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	896	899	889	874	875	0	0%
1944	894	884	854	830	807	2	40%
1945	894	891	875	845	828	1	20%
1946	888	880	862	828	808	2	40%
1947	834	815	777	747	715	5	100%
1948	858	865	825	782	753	3	60%
1949	789	767	729	702	674	5	100%
1950	839	836	797	758	742	5	100%
1951	900	894	868	832	820	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	886	877	0	0%
1954	866	860	837	800	782	3	60%
1955	836	817	784	759	737	5	100%
1956	900	900	894	886	877	0	0%
1957	882	881	858	826	815	2	40%
1958	900	900	894	886	877	0	0%
1959	857	847	825	788	779	3	60%
1960	842	823	784	751	720	4	80%
1961	791	779	748	730	712	5	100%
1962	804	792	770	725	703	5	100%
1963	900	900	894	886	877	0	0%
1964	883	867	833	808	783	3	60%
1965	884	886	878	860	861	0	0%
1966	873	864	844	808	787	2	40%
1967	900	900	894	886	877	0	0%
1968	854	844	826	797	781	3	60%
1969	900	900	894	886	875	0	0%
1970	872	864	846	816	804	2	40%
1971	900	900	894	886	875	0	0%
1972	872	854	830	790	768	3	60%
1973	900	893	875	855	846	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	863	850	834	819	804	3	60%
1977	710	690	672	663	660	5	100%
1978	897	896	885	881	877	0	0%
1979	895	884	874	849	839	1	20%
1980	893	889	882	876	875	0	0%
1981	872	860	827	800	776	3	60%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	892	889	873	866	868	0	0%
1985	880	868	836	809	790	3	60%
1986	875	872	860	843	855	0	0%
1987	855	839	810	789	766	4	80%
1988	800	780	751	739	721	5	100%
1989	858	842	816	800	797	3	60%
1990	805	790	760	746	730	5	100%
1991	736	709	675	659	637	5	100%

158 45%
Percent Availability During Recreation Season 55%

Oroville Reservoir 819 msl Recreation Activity Threshold

OROVILLE RESERVOIR

Oroville Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	849	841	0	0%
1923	900	883	841	795	774	2	40%
1924	696	679	656	641	634	5	100%
1925	803	794	750	710	672	5	100%
1926	792	772	739	717	690	5	100%
1927	900	900	876	835	813	1	20%
1928	862	850	822	779	748	2	40%
1929	731	722	700	685	670	5	100%
1930	854	838	802	771	741	3	60%
1931	705	691	665	647	641	5	100%
1932	795	789	759	735	708	5	100%
1933	711	707	690	677	672	5	100%
1934	731	713	691	675	668	5	100%
1935	850	847	816	765	728	3	60%
1936	882	883	853	808	777	2	40%
1937	825	812	777	716	668	4	80%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	2	40%
1940	883	874	845	804	781	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	870	832	816	1	20%
1944	852	832	794	763	729	3	60%
1945	859	838	801	748	708	3	60%
1946	860	835	797	747	712	3	60%
1947	766	759	736	722	706	5	100%
1948	872	878	838	804	787	2	40%
1949	817	796	760	733	702	5	100%
1950	849	843	806	770	754	3	60%
1951	900	890	856	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	883	877	0	0%
1954	866	857	823	781	758	2	40%
1955	816	799	768	746	724	5	100%
1956	900	900	894	886	877	0	0%
1957	881	869	840	800	781	2	40%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	3	60%
1960	803	792	759	733	709	5	100%
1961	791	783	761	745	728	5	100%
1962	813	801	774	724	694	5	100%
1963	900	900	875	841	834	0	0%
1964	862	850	821	802	782	2	40%
1965	883	885	875	852	847	0	0%
1966	870	847	824	783	758	2	40%
1967	900	900	894	886	877	0	0%
1968	854	830	798	755	724	3	60%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	2	40%
1971	900	900	892	875	865	0	0%
1972	870	846	812	771	747	3	60%
1973	900	886	854	818	792	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	820	806	789	2	40%
1977	697	680	660	650	651	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	2	40%
1980	893	889	882	868	866	0	0%
1981	872	860	836	814	793	2	40%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	832	822	0	0%
1985	870	851	824	804	791	2	40%
1986	875	872	857	818	819	2	40%
1987	807	788	766	747	742	5	100%
1988	810	798	774	761	747	5	100%
1989	868	853	827	812	812	2	40%
1990	816	798	764	745	724	5	100%
1991	733	711	680	668	650	5	100%

166

47%

Percent Availability During Recreation Season

53%

OROVILLE RESERVOIR

Oroville Elevation (ft) State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	2	40%
1924	699	682	659	644	637	5	100%
1925	804	795	752	712	674	5	100%
1926	796	779	749	730	708	5	100%
1927	900	900	876	835	818	1	20%
1928	862	850	822	780	749	2	40%
1929	731	720	690	674	657	5	100%
1930	847	835	801	772	743	3	60%
1931	708	694	669	650	644	5	100%
1932	797	791	761	737	710	5	100%
1933	710	706	688	675	669	5	100%
1934	726	708	685	669	654	5	100%
1935	842	838	807	753	714	3	60%
1936	874	875	844	799	767	2	40%
1937	818	805	768	705	655	5	100%
1938	900	900	894	886	877	0	0%
1939	866	854	828	808	786	2	40%
1940	883	876	846	806	783	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	871	834	818	1	20%
1944	861	843	808	781	751	3	60%
1945	871	850	820	771	735	2	40%
1946	875	851	803	751	714	3	60%
1947	775	767	738	720	700	5	100%
1948	864	871	830	791	777	2	40%
1949	810	792	758	735	712	5	100%
1950	858	853	819	785	769	3	60%
1951	900	890	855	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	884	877	0	0%
1954	866	859	826	784	761	2	40%
1955	818	801	770	749	727	5	100%
1956	900	900	894	886	877	0	0%
1957	881	869	841	803	785	2	40%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	749	3	60%
1960	803	792	758	732	707	5	100%
1961	795	787	765	749	733	5	100%
1962	817	809	777	725	692	5	100%
1963	900	900	881	851	846	0	0%
1964	866	856	830	812	795	2	40%
1965	883	885	875	855	855	0	0%
1966	870	856	832	793	768	2	40%
1967	900	900	894	886	877	0	0%
1968	854	833	806	766	739	3	60%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	2	40%
1971	900	900	894	877	872	0	0%
1972	870	846	819	778	755	3	60%
1973	900	889	858	818	793	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	819	805	788	3	60%
1977	701	684	664	655	656	5	100%
1978	897	896	884	859	866	0	0%
1979	896	871	842	800	768	2	40%
1980	893	889	882	871	869	0	0%
1981	872	860	843	823	806	1	20%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	834	825	0	0%
1985	876	859	834	817	806	2	40%
1986	875	872	856	817	819	2	40%
1987	807	788	766	748	742	5	100%
1988	812	797	767	754	735	5	100%
1989	869	855	832	820	822	0	0%
1990	836	821	791	777	760	3	60%
1991	758	733	690	667	638	5	100%

162 46%
Percent Availability During Recreation Season 54%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	843	0	0%
1923	900	883	841	795	774	2	40%
1924	698	681	658	643	637	5	100%
1925	804	795	751	711	674	5	100%
1926	793	773	741	719	693	5	100%
1927	900	900	876	835	812	1	20%
1928	862	850	822	779	747	2	40%
1929	730	722	700	685	670	5	100%
1930	854	839	802	771	741	3	60%
1931	705	691	666	648	642	5	100%
1932	795	790	760	736	708	5	100%
1933	712	707	690	677	672	5	100%
1934	731	713	691	674	668	5	100%
1935	849	847	816	765	728	3	60%
1936	882	883	853	808	778	2	40%
1937	825	814	779	718	671	4	80%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	2	40%
1940	883	874	845	804	781	2	40%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	889	868	832	816	1	20%
1944	850	829	791	760	726	3	60%
1945	857	835	800	747	707	3	60%
1946	859	834	797	747	711	3	60%
1947	765	758	736	721	706	5	100%
1948	872	878	838	796	778	2	40%
1949	812	793	759	736	712	5	100%
1950	857	852	806	767	748	3	60%
1951	900	889	855	812	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	879	874	0	0%
1954	866	856	822	780	757	2	40%
1955	815	801	774	756	741	5	100%
1956	900	900	894	886	877	0	0%
1957	880	864	835	795	774	2	40%
1958	900	900	894	886	877	0	0%
1959	854	832	806	761	747	3	60%
1960	802	792	759	735	711	5	100%
1961	791	783	761	745	729	5	100%
1962	813	802	774	725	695	5	100%
1963	900	900	874	840	831	0	0%
1964	855	843	815	795	775	3	60%
1965	883	885	875	854	848	0	0%
1966	869	846	820	779	753	2	40%
1967	900	900	894	886	877	0	0%
1968	854	830	798	754	723	3	60%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	2	40%
1971	900	900	887	866	854	0	0%
1972	869	846	806	763	739	3	60%
1973	900	885	853	813	787	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	817	803	787	3	60%
1977	691	673	652	643	644	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	2	40%
1980	893	889	880	864	863	0	0%
1981	872	860	836	815	792	2	40%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	833	822	0	0%
1985	870	851	824	805	792	2	40%
1986	875	872	857	818	819	2	40%
1987	807	788	766	748	743	5	100%
1988	810	798	774	761	747	5	100%
1989	868	853	827	812	812	2	40%
1990	816	798	765	747	726	5	100%
1991	734	712	681	669	651	5	100%

168 48%
Percent Availability During Recreation Season 52%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	881	846	837	0	0%
1923	900	879	836	790	769	2	40%
1924	696	679	656	641	634	5	100%
1925	802	794	755	721	687	5	100%
1926	800	782	751	731	708	5	100%
1927	900	900	876	835	811	1	20%
1928	863	851	822	782	753	2	40%
1929	735	727	708	695	684	5	100%
1930	860	846	811	781	753	3	60%
1931	717	704	680	663	658	5	100%
1932	805	801	771	743	710	5	100%
1933	699	695	678	665	660	5	100%
1934	723	705	683	667	660	5	100%
1935	847	846	821	773	740	2	40%
1936	892	891	860	818	790	2	40%
1937	831	816	780	720	671	4	80%
1938	900	900	894	886	877	0	0%
1939	867	853	825	803	778	2	40%
1940	882	874	845	805	785	2	40%
1941	900	900	893	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	886	889	868	827	806	1	20%
1944	834	815	781	751	719	4	80%
1945	851	829	791	736	697	3	60%
1946	850	822	794	747	718	3	60%
1947	773	766	741	725	708	5	100%
1948	868	874	835	794	781	2	40%
1949	816	798	765	741	717	5	100%
1950	853	843	807	769	759	3	60%
1951	900	888	855	813	794	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	889	859	845	0	0%
1954	865	850	818	779	761	3	60%
1955	819	809	785	770	759	5	100%
1956	900	900	894	872	875	0	0%
1957	881	871	840	796	776	2	40%
1958	900	900	894	886	877	0	0%
1959	856	836	809	767	754	3	60%
1960	807	797	767	744	726	5	100%
1961	807	800	783	766	751	5	100%
1962	823	812	781	732	705	4	80%
1963	900	900	874	835	819	1	20%
1964	837	826	797	777	758	3	60%
1965	883	885	875	842	835	0	0%
1966	870	847	823	783	761	2	40%
1967	900	900	894	886	877	0	0%
1968	852	830	797	755	727	3	60%
1969	900	900	894	886	875	0	0%
1970	876	857	824	778	751	2	40%
1971	900	900	881	853	840	0	0%
1972	870	847	806	767	749	3	60%
1973	900	885	854	813	790	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	885	877	0	0%
1976	862	847	819	809	795	3	60%
1977	703	685	666	656	657	5	100%
1978	897	896	884	852	860	0	0%
1979	896	867	841	801	775	2	40%
1980	893	889	881	852	850	0	0%
1981	872	861	836	816	797	2	40%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	848	811	799	2	40%
1985	852	834	809	792	781	3	60%
1986	875	872	856	817	820	1	20%
1987	813	794	773	755	750	5	100%
1988	817	804	778	766	749	5	100%
1989	867	853	829	816	818	2	40%
1990	828	812	781	766	747	4	80%
1991	750	728	698	685	667	5	100%

Percent Availability During Recreation Season
170 49%
51%

OROVILLE RESERVOIR

Oroville Elevation (ft) Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	2	40%
1924	699	683	660	645	639	5	100%
1925	806	797	753	714	677	5	100%
1926	795	775	744	723	697	5	100%
1927	900	900	876	835	813	1	20%
1928	862	850	822	779	748	2	40%
1929	732	724	704	690	676	5	100%
1930	857	842	806	777	748	3	60%
1931	716	703	679	662	656	5	100%
1932	804	800	770	745	714	5	100%
1933	704	700	683	671	665	5	100%
1934	727	708	687	671	664	5	100%
1935	847	845	814	762	725	3	60%
1936	880	881	851	806	775	2	40%
1937	823	811	775	713	666	4	80%
1938	900	900	894	886	877	0	0%
1939	867	852	823	798	772	2	40%
1940	882	874	845	804	781	2	40%
1941	900	900	894	866	877	0	0%
1942	900	900	894	866	877	0	0%
1943	887	890	868	832	816	1	20%
1944	847	827	790	758	723	3	60%
1945	855	833	791	735	694	3	60%
1946	852	826	797	749	716	3	60%
1947	772	765	740	724	704	5	100%
1948	866	873	832	790	774	2	40%
1949	808	793	760	743	721	5	100%
1950	863	858	825	791	776	2	40%
1951	900	889	856	813	789	2	40%
1952	900	900	894	886	877	0	0%
1953	900	900	894	874	863	0	0%
1954	866	856	823	780	757	2	40%
1955	816	802	775	758	742	5	100%
1956	900	900	894	886	877	0	0%
1957	881	868	839	798	778	2	40%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	3	60%
1960	805	794	762	738	714	5	100%
1961	797	790	769	754	739	5	100%
1962	819	803	773	720	687	5	100%
1963	900	900	874	840	827	0	0%
1964	852	841	812	792	770	3	60%
1965	883	885	875	854	848	0	0%
1966	870	846	822	781	755	2	40%
1967	900	900	894	886	877	0	0%
1968	854	833	805	766	739	3	60%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	2	40%
1971	900	900	888	867	854	0	0%
1972	870	846	813	774	753	3	60%
1973	900	885	854	813	787	2	40%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	818	805	787	3	60%
1977	683	664	643	632	638	5	100%
1978	897	896	884	855	863	0	0%
1979	896	867	839	797	764	2	40%
1980	893	889	877	861	860	0	0%
1981	872	860	838	816	796	2	40%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	831	820	0	0%
1985	870	851	825	805	792	2	40%
1986	875	872	856	817	819	2	40%
1987	809	790	768	750	745	5	100%
1988	815	799	770	758	741	5	100%
1989	864	850	825	811	811	2	40%
1990	816	798	763	745	723	5	100%
1991	728	706	676	664	646	5	100%

Percent Availability During Recreation Season

167 48%
 52%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 819 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	893	866	877	0	0%
1923	900	895	879	847	835	0	0%
1924	777	759	734	723	710	5	10%
1925	824	813	773	741	706	4	8%
1926	819	799	767	746	723	5	10%
1927	900	900	891	874	871	0	0%
1928	863	853	831	794	769	2	4%
1929	751	740	708	693	671	5	10%
1930	854	833	799	771	745	3	6%
1931	707	694	670	652	648	5	10%
1932	799	794	764	741	715	5	10%
1933	714	711	693	682	678	5	10%
1934	734	716	696	680	660	5	10%
1935	847	848	833	797	777	2	4%
1936	897	898	886	867	853	0	0%
1937	897	895	883	858	845	0	0%
1938	900	890	894	886	877	0	0%
1939	866	848	815	787	759	3	6%
1940	884	879	855	819	801	2	4%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	896	899	889	874	875	0	0%
1944	894	884	854	830	807	1	2%
1945	894	891	875	845	828	0	0%
1946	888	880	862	828	808	1	2%
1947	834	815	777	747	715	4	8%
1948	858	865	825	782	753	2	4%
1949	789	767	729	702	674	5	10%
1950	839	836	797	758	742	3	6%
1951	900	894	868	832	820	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	886	877	0	0%
1954	866	860	837	800	782	2	4%
1955	836	817	784	759	737	4	8%
1956	900	900	894	886	877	0	0%
1957	882	881	856	826	815	1	2%
1958	900	900	894	886	877	0	0%
1959	857	847	825	788	778	2	4%
1960	842	823	784	751	720	3	6%
1961	761	779	748	730	712	5	10%
1962	804	792	770	725	703	5	10%
1963	900	900	894	886	877	0	0%
1964	863	867	833	808	783	2	4%
1965	884	886	878	860	861	0	0%
1966	873	864	844	808	787	2	4%
1967	900	900	894	886	877	0	0%
1968	854	844	826	797	781	2	4%
1969	900	900	894	886	875	0	0%
1970	872	864	846	816	804	2	4%
1971	900	900	894	886	875	0	0%
1972	872	854	830	790	768	2	4%
1973	900	893	875	855	846	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	863	850	834	819	804	2	4%
1977	710	690	672	663	660	5	10%
1978	897	896	885	881	877	0	0%
1979	896	884	874	849	839	0	0%
1980	893	889	882	876	875	0	0%
1981	872	860	827	800	776	2	4%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	892	889	873	866	868	0	0%
1985	880	868	836	809	790	2	4%
1986	875	872	860	843	855	0	0%
1987	855	839	810	789	766	3	6%
1988	800	780	751	739	721	5	10%
1989	858	842	816	800	797	3	6%
1990	805	790	760	746	730	5	10%
1991	736	709	675	659	637	5	10%

Percent Availability During Recreation Season

Oroville Reservoir 750 msl Recreation Activity Threshold

OROVILLE RESERVOIR

Oroville Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	849	841	0	0%
1923	900	883	841	795	774	0	0%
1924	696	679	656	641	634	5	100%
1925	803	794	750	710	672	3	60%
1926	792	772	739	717	690	3	60%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	1	20%
1929	731	722	700	685	670	5	100%
1930	854	838	802	771	741	1	20%
1931	705	691	665	647	641	5	100%
1932	795	789	759	735	708	2	40%
1933	711	707	690	677	672	5	100%
1934	731	713	691	675	668	5	100%
1935	850	847	816	765	728	1	20%
1936	882	883	853	808	777	0	0%
1937	825	812	777	716	668	2	40%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	870	832	816	0	0%
1944	852	832	794	763	729	1	20%
1945	859	838	801	748	708	2	40%
1946	860	835	797	747	712	2	40%
1947	766	759	736	722	706	3	60%
1948	872	878	838	804	787	0	0%
1949	817	796	760	733	702	2	40%
1950	849	843	806	770	754	0	0%
1951	900	890	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	883	877	0	0%
1954	866	857	823	781	758	0	0%
1955	816	799	768	746	724	2	40%
1956	900	900	894	886	877	0	0%
1957	881	869	840	800	781	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	1	20%
1960	803	792	759	733	709	2	40%
1961	791	783	761	745	728	2	40%
1962	813	801	774	724	694	2	40%
1963	900	900	875	841	834	0	0%
1964	862	850	821	802	782	0	0%
1965	883	885	875	852	847	0	0%
1966	870	847	824	783	758	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	755	724	1	20%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	892	875	865	0	0%
1972	870	846	812	771	747	1	20%
1973	900	886	854	818	792	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	820	806	789	0	0%
1977	697	680	660	650	651	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	882	868	866	0	0%
1981	872	860	836	814	793	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	832	822	0	0%
1985	870	851	824	804	791	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	747	742	2	40%
1988	810	798	774	761	747	1	20%
1989	868	853	827	812	812	0	0%
1990	816	798	764	745	724	2	40%
1991	733	711	680	668	650	5	100%

OROVILLE RESERVOIR

Oroville Elevation (ft) State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season	
1922	900	900	880	851	844	0	0%	
1923	900	883	841	795	774	0	0%	
1924	699	682	659	644	637	5	100%	
1925	804	795	752	712	674	2	40%	
1926	796	779	749	730	708	3	60%	
1927	900	900	876	835	818	0	0%	
1928	862	850	822	780	749	1	20%	
1929	731	720	690	674	657	5	100%	
1930	847	835	801	772	743	1	20%	
1931	708	694	669	650	644	5	100%	
1932	797	791	761	737	710	2	40%	
1933	710	706	688	675	669	5	100%	
1934	726	708	685	669	654	5	100%	
1935	842	838	807	753	714	1	20%	
1936	874	875	844	799	767	0	0%	
1937	818	805	768	705	655	2	40%	
1938	900	900	894	886	877	0	0%	
1939	866	854	828	808	786	0	0%	
1940	883	876	846	805	783	0	0%	
1941	900	900	894	886	877	0	0%	
1942	900	900	894	886	877	0	0%	
1943	889	892	871	830	791	777	0	0%
1944	861	843	808	781	751	0	0%	
1945	871	850	820	771	735	1	20%	
1946	875	851	803	751	714	1	20%	
1947	767	738	738	720	700	3	60%	
1948	864	871	830	791	777	0	0%	
1949	810	792	758	735	712	2	40%	
1950	858	853	819	785	769	0	0%	
1951	900	890	855	813	785	0	0%	
1952	900	900	894	866	877	0	0%	
1953	900	900	894	884	877	0	0%	
1954	866	859	826	784	761	0	0%	
1955	818	801	770	749	727	2	40%	
1956	900	900	894	866	877	0	0%	
1957	881	869	841	803	785	0	0%	
1958	900	900	864	866	877	0	0%	
1959	854	833	807	762	749	1	20%	
1960	803	792	758	732	707	2	40%	
1961	795	787	765	749	733	2	40%	
1962	817	809	777	725	692	2	40%	
1963	900	900	881	851	846	0	0%	
1964	866	856	830	812	795	0	0%	
1965	883	885	875	855	855	0	0%	
1966	870	856	832	793	768	0	0%	
1967	900	900	894	886	877	0	0%	
1968	854	833	806	766	759	1	20%	
1969	900	900	894	886	877	0	0%	
1970	877	858	824	779	751	0	0%	
1971	900	900	894	877	872	0	0%	
1972	870	846	819	778	755	0	0%	
1973	900	889	858	818	793	0	0%	
1974	896	871	842	800	788	0	0%	
1975	900	900	894	886	877	0	0%	
1976	862	850	824	786	766	2	40%	
1977	701	684	664	655	656	5	100%	
1978	897	866	849	809	859	0	0%	
1979	896	859	834	817	806	0	0%	
1980	893	889	882	871	869	0	0%	
1981	875	872	843	823	806	0	0%	
1982	900	900	894	886	877	0	0%	
1983	900	900	894	886	877	0	0%	
1984	895	877	849	834	825	0	0%	
1985	866	859	834	817	806	0	0%	
1986	875	872	856	817	819	0	0%	
1987	807	788	766	748	742	2	40%	
1988	812	797	767	754	735	1	20%	
1989	869	855	832	820	822	0	0%	
1990	836	821	791	777	760	0	0%	
1991	758	733	690	657	638	4	80%	

Percent Availability During Recreation Season

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	843	0	0%
1923	900	883	841	795	774	0	0%
1924	698	681	658	643	637	5	100%
1925	804	795	751	711	674	2	40%
1926	793	773	741	719	693	3	60%
1927	900	900	876	835	812	0	0%
1928	862	850	822	779	747	1	20%
1929	730	722	700	685	670	5	100%
1930	854	839	802	771	741	1	20%
1931	705	691	666	648	642	5	100%
1932	795	790	760	736	708	2	40%
1933	712	707	690	677	672	5	100%
1934	731	713	691	674	668	5	100%
1935	849	847	816	765	728	1	20%
1936	882	883	853	808	778	0	0%
1937	825	814	779	718	671	2	40%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	889	868	832	816	0	0%
1944	850	829	791	760	726	1	20%
1945	857	835	800	747	707	2	40%
1946	859	834	797	747	711	2	40%
1947	765	758	736	721	705	3	60%
1948	872	878	838	796	778	0	0%
1949	812	793	759	736	712	2	40%
1950	857	852	806	767	748	1	20%
1951	900	889	855	812	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	879	874	0	0%
1954	866	856	822	780	757	0	0%
1955	815	801	774	756	741	1	20%
1956	900	900	894	886	877	0	0%
1957	880	864	835	795	774	0	0%
1958	900	900	894	886	877	0	0%
1959	854	832	806	761	747	1	20%
1960	802	792	759	735	711	2	40%
1961	791	783	761	745	729	2	40%
1962	813	802	774	725	695	2	40%
1963	900	900	874	840	831	0	0%
1964	855	843	815	795	775	0	0%
1965	883	885	875	854	848	0	0%
1966	869	846	820	779	753	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	754	723	1	20%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	887	866	854	0	0%
1972	869	846	806	763	739	1	20%
1973	900	885	853	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	817	803	787	0	0%
1977	691	673	652	643	644	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	880	864	863	0	0%
1981	872	860	836	815	792	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	833	822	0	0%
1985	870	851	824	805	792	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	748	743	2	40%
1988	810	798	774	761	747	1	20%
1989	868	853	827	812	812	0	0%
1990	816	798	765	747	726	2	40%
1991	734	712	681	669	651	5	100%

73

21%
Percent Availability During Recreation Season
79%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	881	846	837	0	0%
1923	900	879	836	790	769	0	0%
1924	696	679	656	641	634	5	10%
1925	802	794	755	721	687	2	40%
1926	800	782	751	731	708	0	0%
1927	900	900	876	835	811	0	0%
1928	863	851	822	782	753	0	0%
1929	735	727	708	695	684	5	10%
1930	860	846	811	781	753	0	0%
1931	717	704	680	663	658	5	10%
1932	805	801	771	743	710	2	40%
1933	699	695	678	665	660	5	100%
1934	723	705	683	667	660	5	100%
1935	847	846	821	773	740	1	20%
1936	892	891	860	818	790	0	0%
1937	831	816	780	720	671	2	40%
1938	900	900	894	886	877	0	0%
1939	867	853	825	803	778	0	0%
1940	882	874	845	805	785	0	0%
1941	900	900	893	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	886	889	868	827	806	0	0%
1944	834	815	781	751	719	1	20%
1945	851	829	791	736	697	2	40%
1946	850	822	794	747	718	2	40%
1947	773	766	741	725	708	3	60%
1948	868	874	835	794	781	0	0%
1949	816	798	765	741	717	2	40%
1950	853	843	807	769	759	0	0%
1951	900	888	865	813	794	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	869	859	845	0	0%
1954	865	850	818	779	745	0	0%
1955	819	809	785	770	759	0	0%
1956	900	900	894	872	875	0	0%
1957	881	871	840	796	776	0	0%
1958	900	900	894	886	877	0	0%
1959	866	856	809	767	754	0	0%
1960	807	797	767	744	726	2	40%
1961	807	800	783	766	751	0	0%
1962	823	812	781	732	705	2	40%
1963	900	900	874	835	819	0	0%
1964	837	826	797	777	758	0	0%
1965	883	885	875	842	835	0	0%
1966	870	847	823	783	761	0	0%
1967	900	900	894	886	877	0	0%
1968	852	830	797	755	727	1	20%
1969	900	894	866	825	805	0	0%
1970	876	857	824	778	751	0	0%
1971	900	900	881	853	840	0	0%
1972	870	847	806	767	749	1	20%
1973	900	885	854	813	790	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	885	877	0	0%
1976	862	847	819	809	795	0	0%
1977	703	685	666	656	657	5	100%
1978	897	896	884	852	860	0	0%
1979	896	867	841	801	775	0	0%
1980	893	889	881	852	850	0	0%
1981	872	861	836	816	797	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	848	811	799	0	0%
1985	852	834	809	792	781	0	0%
1986	875	872	856	817	820	0	0%
1987	813	794	773	755	750	1	20%
1988	817	804	778	766	749	1	20%
1989	867	853	829	816	818	0	0%
1990	828	812	781	766	747	1	20%
1991	750	728	698	685	667	5	18%
						63	100%
						82%	-

Percent Availability During Recreation Season

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Flow Evaluation Study Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	0	0%
1924	699	683	660	645	639	5	100%
1925	806	797	753	714	677	2	40%
1926	795	775	744	723	697	3	60%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	1	20%
1929	732	724	704	690	676	5	100%
1930	857	842	806	777	748	1	20%
1931	716	703	679	662	656	5	100%
1932	804	800	770	745	714	2	40%
1933	704	700	683	671	665	5	100%
1934	727	708	687	671	664	5	100%
1935	847	845	814	762	725	1	20%
1936	880	881	851	806	775	0	0%
1937	823	811	775	713	666	2	40%
1938	900	900	894	886	877	0	0%
1939	867	852	823	798	772	0	0%
1940	882	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	890	868	832	816	0	0%
1944	847	827	790	758	723	1	20%
1945	855	833	791	735	694	2	40%
1946	852	826	797	749	716	2	40%
1947	772	765	740	724	704	3	60%
1948	866	873	832	790	774	0	0%
1949	808	793	760	743	721	2	40%
1950	863	858	825	791	776	0	0%
1951	900	889	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	874	863	0	0%
1954	866	856	823	780	757	0	0%
1955	816	802	775	758	742	1	20%
1956	900	900	894	886	877	0	0%
1957	881	868	839	798	778	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	1	20%
1960	805	794	762	738	714	2	40%
1961	797	790	769	754	739	1	20%
1962	819	803	773	720	687	2	40%
1963	900	900	874	840	827	0	0%
1964	852	841	812	792	770	0	0%
1965	883	885	875	854	848	0	0%
1966	870	846	822	781	755	0	0%
1967	900	900	894	886	877	0	0%
1968	854	833	805	766	739	1	20%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	888	867	854	0	0%
1972	870	846	813	774	753	0	0%
1973	900	885	854	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	818	805	787	0	0%
1977	683	664	643	632	638	5	100%
1978	897	896	884	855	863	0	0%
1979	896	867	839	797	764	0	0%
1980	893	889	877	861	860	0	0%
1981	872	860	838	816	796	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	831	820	0	0%
1985	870	851	825	805	792	0	0%
1986	875	872	856	817	819	0	0%
1987	809	790	768	750	745	2	40%
1988	815	799	770	758	741	1	20%
1989	864	850	825	811	811	0	0%
1990	816	798	763	745	723	2	40%
1991	728	706	676	664	646	5	100%

Percent Availability During Recreation Season

70 20%
 80%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 750 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	893	886	877	0	0%
1923	900	895	879	847	835	0	0%
1924	777	759	734	723	710	3	60%
1925	824	813	773	741	706	2	40%
1926	819	799	767	746	723	2	40%
1927	900	900	891	874	871	0	0%
1928	863	853	831	794	769	0	0%
1929	751	740	708	693	671	4	80%
1930	854	833	799	771	745	1	20%
1931	707	694	670	652	648	5	100%
1932	799	794	764	741	715	2	40%
1933	714	711	693	682	678	5	100%
1934	734	716	696	680	660	5	100%
1935	847	848	833	797	777	0	0%
1936	897	898	886	867	853	0	0%
1937	897	895	883	858	845	0	0%
1938	900	900	894	886	877	0	0%
1939	866	848	815	787	759	0	0%
1940	884	879	855	819	801	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	896	899	889	874	875	0	0%
1944	894	884	854	830	807	0	0%
1945	894	891	875	845	828	0	0%
1946	888	880	862	828	808	0	0%
1947	834	815	777	747	715	2	40%
1948	858	865	825	782	753	0	0%
1949	789	767	729	702	674	3	60%
1950	839	836	797	758	742	1	20%
1951	900	894	868	832	820	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	886	877	0	0%
1954	866	860	837	800	782	0	0%
1955	836	817	784	759	737	1	20%
1956	900	900	894	886	877	0	0%
1957	882	881	858	826	815	0	0%
1958	900	900	894	886	877	0	0%
1959	857	847	825	788	779	0	0%
1960	842	823	784	751	720	1	20%
1961	791	779	748	730	712	3	60%
1962	804	792	770	725	703	2	40%
1963	900	900	894	886	877	0	0%
1964	883	867	833	808	783	0	0%
1965	884	886	878	860	861	0	0%
1966	873	864	844	808	787	0	0%
1967	900	900	894	886	877	0	0%
1968	854	844	826	797	781	0	0%
1969	900	900	894	886	875	0	0%
1970	872	864	846	816	804	0	0%
1971	900	900	894	886	875	0	0%
1972	872	854	830	790	768	0	0%
1973	900	893	875	855	846	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	863	850	834	819	804	0	0%
1977	710	690	672	663	660	5	100%
1978	897	896	885	881	877	0	0%
1979	896	884	874	849	839	0	0%
1980	893	889	882	876	875	0	0%
1981	872	860	827	800	776	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	892	889	873	866	868	0	0%
1985	880	868	836	809	790	0	0%
1986	875	872	860	843	855	0	0%
1987	855	839	810	789	766	0	0%
1988	800	780	751	739	721	2	40%
1989	858	842	816	800	797	0	0%
1990	805	790	760	746	730	2	40%
1991	736	709	675	659	637	5	100%
						56	16%
							84%

Percent Availability During Recreation Season

Oroville Reservoir 710 msl Recreation Activity Threshold

C - 0 9 2 8 8 1

C-092881

OROVILLE RESERVOIR

Oroville Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	849	841	0	0%
1923	900	883	841	795	774	0	0%
1924	696	679	656	641	634	5	100%
1925	803	794	750	710	672	2	40%
1926	792	772	739	717	690	1	20%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	0	0%
1929	731	722	700	685	670	3	60%
1930	854	838	802	771	741	0	0%
1931	705	691	665	647	641	5	100%
1932	795	789	759	735	708	1	20%
1933	711	707	690	677	672	4	80%
1934	731	713	691	675	668	3	60%
1935	850	847	816	765	728	0	0%
1936	882	883	853	808	777	0	0%
1937	825	812	777	716	668	1	20%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	870	832	816	0	0%
1944	852	832	794	763	729	0	0%
1945	859	838	801	748	708	1	20%
1946	860	835	797	747	712	0	0%
1947	766	759	736	722	706	1	20%
1948	872	878	838	804	787	0	0%
1949	817	796	760	733	702	1	20%
1950	849	843	806	770	754	0	0%
1951	900	890	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	883	877	0	0%
1954	866	857	823	781	758	0	0%
1955	816	799	768	746	724	0	0%
1956	900	900	894	886	877	0	0%
1957	881	859	840	800	781	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	0	0%
1960	803	792	759	733	709	1	20%
1961	791	783	761	745	728	0	0%
1962	813	801	774	724	694	1	20%
1963	900	900	875	841	834	0	0%
1964	862	850	821	802	782	0	0%
1965	883	885	875	852	847	0	0%
1966	870	847	824	783	758	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	755	724	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	892	875	865	0	0%
1972	870	846	812	771	747	0	0%
1973	900	886	854	818	792	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	820	806	789	0	0%
1977	697	680	660	650	651	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	882	868	866	0	0%
1981	872	860	836	814	793	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	832	822	0	0%
1985	870	851	824	804	791	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	747	742	0	0%
1988	810	798	774	761	747	0	0%
1989	868	853	827	812	812	0	0%
1990	816	798	764	745	724	0	0%
1991	733	711	680	668	650	3	60%

38

11%
Percent Availability During Recreation Season
89%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
State Permit Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	0	0%
1924	699	682	659	644	637	5	100%
1925	804	795	752	712	674	1	20%
1926	796	779	749	730	708	1	20%
1927	900	900	876	835	818	0	0%
1928	862	850	822	780	749	0	0%
1929	731	720	690	674	657	3	60%
1930	847	835	801	772	743	0	0%
1931	708	694	669	650	644	5	100%
1932	797	791	761	737	710	1	20%
1933	710	706	688	675	669	5	100%
1934	726	708	685	669	654	4	80%
1935	842	838	807	753	714	0	0%
1936	874	875	844	799	767	0	0%
1937	818	805	768	705	655	2	40%
1938	900	900	894	886	877	0	0%
1939	866	854	828	808	786	0	0%
1940	883	876	846	806	783	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	871	834	818	0	0%
1944	861	843	808	781	751	0	0%
1945	871	850	820	771	735	0	0%
1946	875	851	803	751	714	0	0%
1947	775	767	738	720	700	1	20%
1948	864	871	830	791	777	0	0%
1949	810	792	758	735	712	0	0%
1950	858	853	819	785	769	0	0%
1951	900	890	855	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	884	877	0	0%
1954	866	859	826	784	761	0	0%
1955	818	801	770	749	727	0	0%
1956	900	900	894	886	877	0	0%
1957	881	869	841	803	785	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	749	0	0%
1960	803	792	758	732	707	1	20%
1961	795	787	765	749	733	0	0%
1962	817	809	777	725	692	1	20%
1963	900	900	881	851	846	0	0%
1964	866	856	830	812	795	0	0%
1965	883	885	875	855	855	0	0%
1966	870	856	832	793	768	0	0%
1967	900	900	894	886	877	0	0%
1968	854	833	806	766	739	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	894	877	872	0	0%
1972	870	846	819	778	755	0	0%
1973	900	889	858	818	793	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	819	805	788	0	0%
1977	701	684	664	655	656	5	100%
1978	897	896	884	859	866	0	0%
1979	896	871	842	800	768	0	0%
1980	893	889	882	871	869	0	0%
1981	872	860	843	823	806	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	834	825	0	0%
1985	876	859	834	817	806	0	0%
1986	875	872	856	817	819	0	0%
1987	807	788	766	748	742	0	0%
1988	812	797	767	754	735	0	0%
1989	869	855	832	820	822	0	0%
1990	836	821	791	777	760	0	0%
1991	758	733	690	667	638	3	60%

Percent Availability During Recreation Season

38

11%
89%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	843	0	0%
1923	900	883	841	795	774	0	0%
1924	698	681	658	643	637	5	100%
1925	804	795	751	711	674	1	20%
1926	793	773	741	719	693	1	20%
1927	900	900	876	835	812	0	0%
1928	862	850	822	779	747	0	0%
1929	730	722	700	685	670	3	60%
1930	854	839	802	771	741	0	0%
1931	705	691	666	648	642	5	100%
1932	795	790	760	736	708	1	20%
1933	712	707	690	677	672	4	80%
1934	731	713	691	674	668	3	60%
1935	849	847	816	765	728	0	0%
1936	882	883	853	808	778	0	0%
1937	825	814	779	718	671	1	20%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	889	868	832	816	0	0%
1944	850	829	791	760	726	0	0%
1945	857	835	800	747	707	1	20%
1946	859	834	797	747	711	0	0%
1947	765	758	736	721	706	1	20%
1948	872	878	838	796	778	0	0%
1949	812	793	759	736	712	0	0%
1950	857	852	806	767	748	0	0%
1951	900	889	855	812	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	879	874	0	0%
1954	866	856	822	780	757	0	0%
1955	815	801	774	756	741	0	0%
1956	900	900	894	886	877	0	0%
1957	880	864	835	795	774	0	0%
1958	900	900	894	886	877	0	0%
1959	854	832	806	761	747	0	0%
1960	802	792	759	735	711	0	0%
1961	791	783	761	745	729	0	0%
1962	813	802	774	725	695	1	20%
1963	900	900	874	840	831	0	0%
1964	855	843	815	795	775	0	0%
1965	883	885	875	854	848	0	0%
1966	869	846	820	779	753	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	754	723	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	887	866	854	0	0%
1972	869	846	806	763	739	0	0%
1973	900	885	853	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	817	803	787	0	0%
1977	691	673	652	643	644	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	880	864	863	0	0%
1981	872	860	836	815	792	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	833	822	0	0%
1985	870	851	824	805	792	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	748	743	0	0%
1988	810	798	774	761	747	0	0%
1989	868	853	827	812	812	0	0%
1990	816	798	765	747	726	0	0%
1991	734	712	681	669	651	3	60%

OROVILLE RESERVOIR

Oroville Elevation (ft)
Revised Max Flow Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	881	846	837	0	0%
1923	900	879	836	790	769	0	0%
1924	696	679	656	641	634	5	100%
1925	802	794	755	721	687	1	20%
1926	800	782	751	731	708	1	20%
1927	900	900	876	835	811	0	0%
1928	863	851	822	782	753	0	0%
1929	735	727	708	695	684	3	60%
1930	860	846	811	781	753	0	0%
1931	717	704	680	663	658	4	80%
1932	805	801	771	743	710	1	20%
1933	699	695	678	665	660	5	100%
1934	723	705	683	667	660	4	80%
1935	847	846	821	773	740	0	0%
1936	892	891	860	818	790	0	0%
1937	831	816	780	720	671	1	20%
1938	900	900	894	886	877	0	0%
1939	867	853	825	803	778	0	0%
1940	882	874	845	805	785	0	0%
1941	900	900	893	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	886	889	868	827	806	0	0%
1944	834	815	781	751	719	0	0%
1945	851	829	791	736	697	1	20%
1946	850	822	794	747	718	0	0%
1947	773	766	741	725	708	1	20%
1948	868	874	835	794	781	0	0%
1949	816	798	765	741	717	0	0%
1950	853	843	807	769	759	0	0%
1951	900	888	855	813	794	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	889	859	845	0	0%
1954	865	850	818	779	761	0	0%
1955	819	809	785	770	759	0	0%
1956	900	900	894	872	875	0	0%
1957	881	871	840	796	776	0	0%
1958	900	900	894	886	877	0	0%
1959	856	836	809	767	754	0	0%
1960	807	797	767	744	726	0	0%
1961	807	800	783	766	751	0	0%
1962	823	812	781	732	705	1	20%
1963	900	900	874	835	819	0	0%
1964	837	826	797	777	758	0	0%
1965	883	885	875	842	835	0	0%
1966	870	847	823	783	761	0	0%
1967	900	900	894	886	877	0	0%
1968	852	830	797	755	727	0	0%
1969	900	900	894	886	875	0	0%
1970	876	857	824	778	751	0	0%
1971	900	900	881	853	840	0	0%
1972	870	847	806	767	749	0	0%
1973	900	885	854	813	790	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	885	877	0	0%
1976	862	847	819	809	795	0	0%
1977	703	685	666	656	657	5	100%
1978	897	896	884	852	860	0	0%
1979	896	867	841	801	775	0	0%
1980	893	889	881	852	850	0	0%
1981	872	861	836	816	797	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	848	811	799	0	0%
1985	852	834	809	792	781	0	0%
1986	875	872	856	817	820	0	0%
1987	813	794	773	755	750	0	0%
1988	817	804	778	766	749	0	0%
1989	867	853	829	816	818	0	0%
1990	828	812	781	766	747	0	0%
1991	750	728	698	685	667	3	60%

Percent Availability During Recreation Season

36 10%
90%

OROVILLE RESERVOIR

Oroville Elevation (ft)
Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	0	0%
1924	699	683	660	645	639	5	100%
1925	806	797	753	714	677	1	20%
1926	795	775	744	723	697	1	20%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	0	0%
1929	732	724	704	690	676	3	60%
1930	857	842	806	777	748	0	0%
1931	716	703	679	662	656	4	80%
1932	804	800	770	745	714	0	0%
1933	704	700	683	671	665	5	100%
1934	727	708	687	671	664	4	80%
1935	847	845	814	762	725	0	0%
1936	880	881	851	806	775	0	0%
1937	823	811	775	713	666	1	20%
1938	900	900	894	886	877	0	0%
1939	867	852	823	798	772	0	0%
1940	882	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	890	868	832	816	0	0%
1944	847	827	790	758	723	0	0%
1945	855	833	791	735	694	1	20%
1946	852	826	797	749	716	0	0%
1947	772	765	740	724	704	1	20%
1948	866	873	832	790	774	0	0%
1949	808	793	760	743	721	0	0%
1950	863	858	825	791	776	0	0%
1951	900	889	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	874	863	0	0%
1954	866	856	823	780	757	0	0%
1955	816	802	775	758	742	0	0%
1956	900	900	894	886	877	0	0%
1957	881	868	839	798	778	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	0	0%
1960	805	794	762	738	714	0	0%
1961	797	790	769	754	739	0	0%
1962	819	803	773	720	687	1	20%
1963	900	900	874	840	827	0	0%
1964	852	841	812	792	770	0	0%
1965	883	885	875	854	848	0	0%
1966	870	846	822	781	755	0	0%
1967	900	900	894	886	877	0	0%
1968	854	833	805	766	739	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	888	867	854	0	0%
1972	870	846	813	774	753	0	0%
1973	900	885	854	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	818	805	787	0	0%
1977	683	664	643	632	638	5	100%
1978	897	896	884	855	863	0	0%
1979	896	867	839	797	764	0	0%
1980	893	889	877	861	860	0	0%
1981	872	860	838	816	796	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	831	820	0	0%
1985	870	851	825	805	792	0	0%
1986	875	872	856	817	819	0	0%
1987	809	790	768	750	745	0	0%
1988	815	799	770	758	741	0	0%
1989	864	850	825	811	811	0	0%
1990	816	798	763	745	723	0	0%
1991	728	706	676	664	646	4	80%

Percent Availability During Recreation Season

36 10%
90%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 710 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	893	886	877	0	0%
1923	900	895	879	847	835	0	0%
1924	777	759	734	723	710	1	20%
1925	824	813	773	741	706	1	20%
1926	819	799	767	746	723	0	0%
1927	900	900	891	874	871	0	0%
1928	863	853	831	794	769	0	0%
1929	751	740	708	693	671	3	60%
1930	854	833	799	771	745	0	0%
1931	707	694	670	652	648	5	100%
1932	799	794	764	741	715	0	0%
1933	714	711	693	682	678	3	60%
1934	734	716	696	680	660	3	60%
1935	847	848	833	797	777	0	0%
1936	897	898	886	867	853	0	0%
1937	897	895	883	858	845	0	0%
1938	900	900	894	886	877	0	0%
1939	866	848	815	787	759	0	0%
1940	884	879	855	819	801	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	896	899	889	874	875	0	0%
1944	894	884	854	830	807	0	0%
1945	894	891	875	845	828	0	0%
1946	888	880	862	828	808	0	0%
1947	834	815	777	747	715	0	0%
1948	858	865	825	782	753	0	0%
1949	789	767	729	702	674	2	40%
1950	839	836	797	758	742	0	0%
1951	900	894	868	832	820	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	886	877	0	0%
1954	866	860	837	800	782	0	0%
1955	836	817	784	759	737	0	0%
1956	900	900	894	886	877	0	0%
1957	882	881	858	826	815	0	0%
1958	900	900	894	886	877	0	0%
1959	857	847	825	788	779	0	0%
1960	842	823	784	751	720	0	0%
1961	791	779	748	730	712	0	0%
1962	804	792	770	725	703	1	20%
1963	900	900	894	886	877	0	0%
1964	883	867	833	808	783	0	0%
1965	884	886	878	860	861	0	0%
1966	873	864	844	808	787	0	0%
1967	900	900	894	886	877	0	0%
1968	854	844	826	797	781	0	0%
1969	900	900	894	886	875	0	0%
1970	872	864	846	816	804	0	0%
1971	900	900	894	886	875	0	0%
1972	872	854	830	790	768	0	0%
1973	900	893	875	855	846	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	863	850	834	819	804	0	0%
1977	710	690	672	663	660	5	100%
1978	897	896	885	881	877	0	0%
1979	896	884	874	849	839	0	0%
1980	893	889	882	876	875	0	0%
1981	872	860	827	800	776	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	892	889	873	866	868	0	0%
1985	880	868	836	809	790	0	0%
1986	875	872	860	843	855	0	0%
1987	855	839	810	789	766	0	0%
1988	800	780	751	739	721	0	0%
1989	858	842	816	800	797	0	0%
1990	805	790	760	746	730	0	0%
1991	736	709	675	659	637	4	80%

Percent Availability During Recreation Season 28% 8% 92%

Oroville Reservoir 700 msl Recreation Activity Threshold

OROVILLE RESERVOIR

Oroville Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	849	841	0	0%
1923	900	883	841	795	774	0	0%
1924	696	679	656	641	634	5	100%
1925	803	794	750	710	672	1	20%
1926	792	772	739	717	690	1	20%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	0	0%
1929	731	722	700	685	670	3	60%
1930	854	838	802	771	741	0	0%
1931	705	691	665	647	641	4	80%
1932	795	789	759	735	708	0	0%
1933	711	707	690	677	672	3	60%
1934	731	713	691	675	668	3	60%
1935	850	847	816	765	728	0	0%
1936	882	883	853	808	777	0	0%
1937	825	812	777	716	668	1	20%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	870	832	816	0	0%
1944	852	832	794	763	729	0	0%
1945	859	838	801	748	708	0	0%
1946	860	835	797	747	712	0	0%
1947	766	759	736	722	706	0	0%
1948	872	878	838	804	787	0	0%
1949	817	796	760	733	702	0	0%
1950	849	843	806	770	754	0	0%
1951	900	890	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	883	877	0	0%
1954	866	857	823	781	758	0	0%
1955	816	799	768	746	724	0	0%
1956	900	900	894	886	877	0	0%
1957	881	869	840	800	781	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	0	0%
1960	803	792	759	733	709	0	0%
1961	791	783	761	745	728	0	0%
1962	813	801	774	724	694	1	20%
1963	900	900	875	841	834	0	0%
1964	862	850	821	802	782	0	0%
1965	883	885	875	852	847	0	0%
1966	870	847	824	783	758	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	755	724	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	892	875	865	0	0%
1972	870	846	812	771	747	0	0%
1973	900	886	854	818	792	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	820	806	789	0	0%
1977	697	680	660	650	651	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	882	868	866	0	0%
1981	872	860	836	814	793	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	832	822	0	0%
1985	870	851	824	804	791	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	747	742	0	0%
1988	810	798	774	761	747	0	0%
1989	868	853	827	812	812	0	0%
1990	816	798	764	745	724	0	0%
1991	733	711	680	668	650	3	60%
						30	9%
						Percent Availability During Recreation Season	91%

OROVILLE RESERVOIR

Oroville Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	0	0%
1924	699	682	659	644	637	5	100%
1925	804	795	752	712	674	1	20%
1926	796	779	749	730	708	0	0%
1927	900	900	876	835	818	0	0%
1928	862	850	822	780	749	0	0%
1929	731	720	690	674	657	3	60%
1930	847	835	801	772	743	0	0%
1931	708	694	669	650	644	4	80%
1932	797	791	761	737	710	0	0%
1933	710	706	688	675	669	3	60%
1934	726	708	685	669	654	3	60%
1935	842	838	807	753	714	0	0%
1936	874	875	844	799	767	0	0%
1937	818	805	768	705	655	1	20%
1938	900	900	894	886	877	0	0%
1939	866	854	828	808	786	0	0%
1940	883	876	846	806	783	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	889	892	871	834	818	0	0%
1944	861	843	808	781	751	0	0%
1945	871	850	820	771	735	0	0%
1946	875	851	803	751	714	0	0%
1947	775	767	738	720	700	1	20%
1948	864	871	830	791	777	0	0%
1949	810	792	758	735	712	0	0%
1950	858	853	819	785	769	0	0%
1951	900	890	855	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	884	877	0	0%
1954	866	859	826	784	761	0	0%
1955	818	801	770	749	727	0	0%
1956	900	900	894	886	877	0	0%
1957	881	869	841	803	785	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	749	0	0%
1960	803	792	758	732	707	0	0%
1961	795	787	765	749	733	0	0%
1962	817	809	777	725	692	1	20%
1963	900	900	881	851	846	0	0%
1964	866	856	830	812	795	0	0%
1965	883	885	875	855	855	0	0%
1966	870	856	832	793	768	0	0%
1967	900	900	894	886	877	0	0%
1968	854	833	806	766	739	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	894	877	872	0	0%
1972	870	846	819	778	755	0	0%
1973	900	889	858	818	793	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	850	819	805	788	0	0%
1977	701	684	664	655	656	4	80%
1978	897	896	884	859	866	0	0%
1979	896	871	842	800	768	0	0%
1980	893	889	882	871	869	0	0%
1981	872	860	843	823	806	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	834	825	0	0%
1985	876	859	834	817	806	0	0%
1986	875	872	856	817	819	0	0%
1987	807	788	766	748	742	0	0%
1988	812	797	767	754	735	0	0%
1989	869	855	832	820	822	0	0%
1990	836	821	791	777	760	0	0%
1991	758	733	690	667	638	3	60%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	843	0	0%
1923	900	883	841	795	774	0	0%
1924	698	681	658	643	637	5	100%
1925	804	795	751	711	674	1	20%
1926	793	773	741	719	693	1	20%
1927	900	900	876	835	812	0	0%
1928	862	850	822	779	747	0	0%
1929	730	722	700	685	670	3	60%
1930	854	839	802	771	741	0	0%
1931	705	691	666	648	642	4	80%
1932	795	790	760	736	708	0	0%
1933	712	707	690	677	672	3	60%
1934	731	713	691	674	668	3	60%
1935	849	847	816	765	728	0	0%
1936	882	883	853	808	778	0	0%
1937	825	814	779	718	671	1	20%
1938	900	900	894	886	877	0	0%
1939	866	853	824	800	776	0	0%
1940	883	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	889	868	832	816	0	0%
1944	850	829	791	760	726	0	0%
1945	857	835	800	747	707	0	0%
1946	859	834	797	747	711	0	0%
1947	765	758	736	721	706	0	0%
1948	872	878	838	796	778	0	0%
1949	812	793	759	736	712	0	0%
1950	857	852	806	767	748	0	0%
1951	900	889	855	812	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	879	874	0	0%
1954	866	856	822	780	757	0	0%
1955	815	801	774	756	741	0	0%
1956	900	900	894	886	877	0	0%
1957	880	864	835	795	774	0	0%
1958	900	900	894	886	877	0	0%
1959	854	832	806	761	747	0	0%
1960	802	792	759	735	711	0	0%
1961	791	783	761	745	729	0	0%
1962	813	802	774	725	695	1	20%
1963	900	900	874	840	831	0	0%
1964	855	843	815	795	775	0	0%
1965	883	885	875	854	848	0	0%
1966	869	846	820	779	753	0	0%
1967	900	900	894	886	877	0	0%
1968	854	830	798	754	723	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	887	866	854	0	0%
1972	869	846	806	763	739	0	0%
1973	900	885	853	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	817	803	787	0	0%
1977	691	673	652	643	644	5	100%
1978	897	896	884	856	864	0	0%
1979	896	866	837	794	761	0	0%
1980	893	889	880	864	863	0	0%
1981	872	860	836	815	792	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	833	822	0	0%
1985	870	851	824	805	792	0	0%
1986	875	872	857	818	819	0	0%
1987	807	788	766	748	743	0	0%
1988	810	798	774	761	747	0	0%
1989	868	853	827	812	812	0	0%
1990	816	798	765	747	726	0	0%
1991	734	712	681	669	651	3	60%

30

9%

Percent Availability During Recreation Season

91%

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	881	846	837	0	0%
1923	900	879	836	790	769	0	0%
1924	696	679	656	641	634	5	100%
1925	802	794	755	721	687	1	20%
1926	800	782	751	731	708	0	0%
1927	900	900	876	835	811	0	0%
1928	863	851	822	782	753	0	0%
1929	735	727	708	695	684	2	40%
1930	860	846	811	781	753	0	0%
1931	717	704	680	663	658	3	60%
1932	805	801	771	743	710	0	0%
1933	699	695	678	665	660	5	100%
1934	723	705	683	667	660	3	60%
1935	847	846	821	773	740	0	0%
1936	892	891	860	818	790	0	0%
1937	831	816	780	720	671	1	20%
1938	900	900	894	886	877	0	0%
1939	867	853	825	803	778	0	0%
1940	882	874	845	805	785	0	0%
1941	900	900	893	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	886	889	868	827	806	0	0%
1944	834	815	781	751	719	0	0%
1945	851	829	791	736	697	1	20%
1946	850	822	794	747	718	0	0%
1947	773	766	741	725	708	0	0%
1948	868	874	835	794	781	0	0%
1949	816	798	765	741	717	0	0%
1950	853	843	807	769	759	0	0%
1951	900	888	855	813	794	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	889	859	845	0	0%
1954	865	850	818	779	761	0	0%
1955	819	809	785	770	759	0	0%
1956	900	900	894	872	875	0	0%
1957	881	871	840	796	776	0	0%
1958	900	900	894	886	877	0	0%
1959	856	836	809	767	754	0	0%
1960	807	797	767	744	726	0	0%
1961	807	800	783	766	751	0	0%
1962	823	812	781	732	705	0	0%
1963	900	900	874	835	819	0	0%
1964	837	826	797	777	758	0	0%
1965	883	885	875	842	835	0	0%
1966	870	847	823	783	761	0	0%
1967	900	900	894	886	877	0	0%
1968	852	830	797	755	727	0	0%
1969	900	900	894	886	875	0	0%
1970	876	857	824	778	751	0	0%
1971	900	900	881	853	840	0	0%
1972	870	847	806	767	749	0	0%
1973	900	885	854	813	790	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	885	877	0	0%
1976	862	847	819	809	795	0	0%
1977	703	685	666	656	657	4	80%
1978	897	896	884	852	860	0	0%
1979	896	867	841	801	775	0	0%
1980	893	889	881	852	850	0	0%
1981	872	861	836	816	797	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	848	811	799	0	0%
1985	852	834	809	792	781	0	0%
1986	875	872	856	817	820	0	0%
1987	813	794	773	755	750	0	0%
1988	817	804	778	766	749	0	0%
1989	867	853	829	816	818	0	0%
1990	828	812	781	766	747	0	0%
1991	750	728	698	685	667	3	60%

Percent Availability During Recreation Season

28

8%

92%

OROVILLE RESERVOIR

Oroville Elevation (ft)
Flow Evaluation Study Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	880	851	844	0	0%
1923	900	883	841	795	774	0	0%
1924	699	683	660	645	639	5	100%
1925	806	797	753	714	677	1	20%
1926	795	775	744	723	697	1	20%
1927	900	900	876	835	813	0	0%
1928	862	850	822	779	748	0	0%
1929	732	724	704	690	676	2	40%
1930	857	842	806	777	748	0	0%
1931	716	703	679	662	656	3	60%
1932	804	800	770	745	714	0	0%
1933	704	700	683	671	665	4	80%
1934	727	708	687	671	664	3	60%
1935	847	845	814	762	725	0	0%
1936	880	881	851	806	775	0	0%
1937	823	811	775	713	666	1	20%
1938	900	900	894	886	877	0	0%
1939	867	852	823	798	772	0	0%
1940	882	874	845	804	781	0	0%
1941	900	900	894	886	877	0	0%
1942	900	900	894	886	877	0	0%
1943	887	890	868	832	816	0	0%
1944	847	827	790	758	723	0	0%
1945	855	833	791	735	694	1	20%
1946	852	826	797	749	716	0	0%
1947	772	765	740	724	704	0	0%
1948	866	873	832	790	774	0	0%
1949	808	793	760	743	721	0	0%
1950	863	858	825	791	776	0	0%
1951	900	889	856	813	789	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	874	863	0	0%
1954	866	856	823	780	757	0	0%
1955	816	802	775	758	742	0	0%
1956	900	900	894	886	877	0	0%
1957	881	868	839	798	778	0	0%
1958	900	900	894	886	877	0	0%
1959	854	833	807	762	748	0	0%
1960	805	794	762	738	714	0	0%
1961	797	790	769	754	739	0	0%
1962	819	803	773	720	687	1	20%
1963	900	900	874	840	827	0	0%
1964	852	841	812	792	770	0	0%
1965	883	885	875	854	848	0	0%
1966	870	846	822	781	755	0	0%
1967	900	900	894	886	877	0	0%
1968	854	833	805	766	739	0	0%
1969	900	900	894	886	875	0	0%
1970	877	858	824	779	751	0	0%
1971	900	900	888	867	854	0	0%
1972	870	846	813	774	753	0	0%
1973	900	885	854	813	787	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	862	849	818	805	787	0	0%
1977	683	664	643	632	638	5	100%
1978	897	896	884	855	863	0	0%
1979	896	867	839	797	764	0	0%
1980	893	889	877	861	860	0	0%
1981	872	860	838	816	796	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	895	877	849	831	820	0	0%
1985	870	851	825	805	792	0	0%
1986	875	872	856	817	819	0	0%
1987	809	790	768	750	745	0	0%
1988	815	799	770	758	741	0	0%
1989	864	850	825	811	811	0	0%
1990	816	798	763	745	723	0	0%
1991	728	706	676	664	646	3	60%
						30	99%
							91%

Percent Availability During Recreation Season

OROVILLE RESERVOIR

**Oroville Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 700 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	900	900	893	886	877	0	0%
1923	900	895	879	847	835	0	0%
1924	777	759	734	723	710	0	0%
1925	824	813	773	741	706	0	0%
1926	819	799	767	746	723	0	0%
1927	900	900	891	874	871	0	0%
1928	863	853	831	794	769	0	0%
1929	751	740	708	693	671	2	40%
1930	854	833	799	771	745	0	0%
1931	707	694	670	652	648	4	80%
1932	799	794	764	741	715	0	0%
1933	714	711	693	682	678	3	60%
1934	734	716	696	680	660	3	60%
1935	847	848	833	797	777	0	0%
1936	897	898	886	867	853	0	0%
1937	897	895	883	858	845	0	0%
1938	900	900	894	886	877	0	0%
1939	866	848	815	787	759	0	0%
1940	884	879	855	819	801	0	0%
1941	900	900	894	866	877	0	0%
1942	900	900	894	886	877	0	0%
1943	896	899	889	874	875	0	0%
1944	894	884	854	830	807	0	0%
1945	894	891	875	845	828	0	0%
1946	888	880	862	828	808	0	0%
1947	834	815	777	747	715	0	0%
1948	858	865	825	782	753	0	0%
1949	789	767	729	702	674	1	20%
1950	839	836	797	758	742	0	0%
1951	900	894	868	832	820	0	0%
1952	900	900	894	886	877	0	0%
1953	900	900	894	886	877	0	0%
1954	866	860	837	800	782	0	0%
1955	836	817	784	759	737	0	0%
1956	900	900	894	886	877	0	0%
1957	882	881	858	826	815	0	0%
1958	900	900	894	886	877	0	0%
1959	857	847	825	788	779	0	0%
1960	842	823	784	751	720	0	0%
1961	791	779	748	730	712	0	0%
1962	804	792	770	725	703	0	0%
1963	900	900	894	886	877	0	0%
1964	883	867	833	808	783	0	0%
1965	884	885	878	860	861	0	0%
1966	873	864	844	808	787	0	0%
1967	900	900	894	886	877	0	0%
1968	854	844	826	797	781	0	0%
1969	900	900	894	886	875	0	0%
1970	872	864	846	816	804	0	0%
1971	900	900	894	886	875	0	0%
1972	872	854	830	790	768	0	0%
1973	900	893	875	855	846	0	0%
1974	900	900	894	886	877	0	0%
1975	900	900	894	886	877	0	0%
1976	863	850	834	819	804	0	0%
1977	710	690	672	663	660	4	80%
1978	897	896	885	881	877	0	0%
1979	896	884	874	849	839	0	0%
1980	893	889	882	876	875	0	0%
1981	872	860	827	800	776	0	0%
1982	900	900	894	886	877	0	0%
1983	900	900	894	886	877	0	0%
1984	892	889	873	866	868	0	0%
1985	880	868	836	809	790	0	0%
1986	875	872	860	843	855	0	0%
1987	855	839	810	789	766	0	0%
1988	800	780	751	739	721	0	0%
1989	858	842	816	800	797	0	0%
1990	805	790	760	746	730	0	0%
1991	736	709	675	659	637	3	60%

Percent Availability During Recreation Season

20 6%
94%

SAN LUIS
RESERVOIR DATA

C - 0 9 2 8 9 5

C-092895

San Luis Reservoir 360 msl
Recreation Activity Threshold

SAN LUIS RESERVOIR

San Luis Elevation (ft)

No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	Months					% of Season
	MAY	JUN	JUL	AUG	SEP	
1922	489	476	422	398	403	0%
1923	462	415	379	348	366	1% 20%
1924	450	433	412	402	408	0% 0%
1925	473	425	387	343	356	2% 40%
1926	443	423	397	354	363	1% 20%
1927	498	402	372	381	0	0% 0%
1928	501	452	410	391	399	0% 0%
1929	447	404	372	342	354	2% 40%
1930	479	435	397	363	379	0% 0%
1931	440	422	399	389	397	0% 0%
1932	487	435	397	365	379	0% 0%
1933	436	407	378	365	381	0% 0%
1934	476	447	410	383	380	0% 0%
1935	502	460	408	383	390	0% 0%
1936	494	453	409	382	389	0% 0%
1937	518	475	415	389	395	0% 0%
1938	543	532	508	478	481	0% 0%
1939	473	432	397	359	365	1% 20%
1940	483	444	400	378	385	0% 0%
1941	534	525	471	436	447	0% 0%
1942	536	524	471	436	444	0% 0%
1943	542	492	436	411	418	0% 0%
1944	475	432	397	352	361	1% 20%
1945	471	435	392	365	374	0% 0%
1946	471	433	397	375	382	0% 0%
1947	463	432	397	356	366	1% 20%
1948	422	401	385	368	378	0% 0%
1949	457	424	383	333	352	2% 40%
1950	445	417	396	383	393	0% 0%
1951	513	465	418	390	399	0% 0%
1952	543	537	516	498	507	0% 0%
1953	506	479	419	389	395	0% 0%
1954	493	448	400	374	381	0% 0%
1955	438	412	378	336	353	2% 40%
1956	528	507	458	422	426	0% 0%
1957	504	462	415	388	395	0% 0%
1958	535	525	490	467	473	0% 0%
1959	495	455	405	381	388	0% 0%
1960	464	427	392	351	368	2% 40%
1961	455	422	385	347	359	2% 40%
1962	479	444	400	383	392	0% 0%
1963	513	474	429	402	411	0% 0%
1964	457	430	397	352	358	2% 40%
1965	517	470	405	379	384	0% 0%
1966	485	453	415	402	409	0% 0%
1967	543	533	513	490	495	0% 0%
1968	495	450	402	377	385	0% 0%
1969	443	536	521	500	508	0% 0%
1970	495	449	405	376	384	0% 0%
1971	478	444	396	364	376	0% 0%
1972	466	428	396	379	388	0% 0%
1973	510	465	418	389	399	0% 0%
1974	524	499	464	437	442	0% 0%
1975	521	497	449	417	422	0% 0%
1976	458	401	372	342	356	2% 40%
1977	415	399	369	349	362	1% 20%
1978	540	506	440	411	422	0% 0%
1979	496	459	412	382	392	0% 0%
1980	537	501	457	437	440	0% 0%
1981	484	436	389	343	355	2% 40%
1982	531	520	492	468	473	0% 0%
1983	543	538	526	518	532	0% 0%
1984	499	457	411	381	390	1% 20%
1985	457	426	397	352	361	0% 0%
1986	525	492	421	396	401	0% 0%
1987	467	443	404	367	368	0% 0%
1988	440	400	372	342	357	2% 40%
1989	439	413	384	350	370	1% 20%
1990	428	400	372	342	350	2% 40%
1991	432	400	372	342	359	2% 40%

Average Percentage
Percent Availability During Recreation Season

32% 91%

SAN LUIS RESERVOIR

San Luis Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	429	406	411	0	0%
1923	470	422	386	353	370	1	20%
1924	446	425	402	388	394	0	0%
1925	477	427	385	334	352	2	40%
1926	440	419	397	352	367	1	20%
1927	499	452	403	373	382	0	0%
1928	503	453	411	392	399	0	0%
1929	441	409	386	352	361	1	20%
1930	474	432	397	360	375	1	20%
1931	439	416	387	368	376	0	0%
1932	481	432	397	363	377	0	0%
1933	437	411	387	358	367	1	20%
1934	470	437	397	366	376	0	0%
1935	496	455	405	381	388	0	0%
1936	495	454	411	384	390	0	0%
1937	519	476	415	389	395	0	0%
1938	543	532	508	478	481	0	0%
1939	475	432	397	360	371	1	20%
1940	483	442	397	375	382	0	0%
1941	532	523	469	433	444	0	0%
1942	536	524	471	436	444	0	0%
1943	542	492	436	411	418	0	0%
1944	472	432	393	348	357	2	40%
1945	474	438	387	359	369	1	20%
1946	463	422	391	366	378	0	0%
1947	457	430	397	357	370	1	20%
1948	414	391	374	364	374	0	0%
1949	458	427	392	351	365	1	20%
1950	451	420	394	376	386	0	0%
1951	510	464	417	389	397	0	0%
1952	543	537	515	497	506	0	0%
1953	506	481	420	389	395	0	0%
1954	496	448	400	374	381	0	0%
1955	439	412	379	337	356	2	40%
1956	527	507	458	423	427	0	0%
1957	504	462	415	388	396	0	0%
1958	535	525	490	467	473	0	0%
1959	495	455	405	382	388	0	0%
1960	465	428	393	352	362	1	20%
1961	464	433	397	352	363	1	20%
1962	486	446	397	376	384	0	0%
1963	505	462	412	384	392	0	0%
1964	450	422	392	352	359	2	40%
1965	515	468	403	376	382	0	0%
1966	491	457	415	401	409	0	0%
1967	543	533	513	490	495	0	0%
1968	498	455	405	382	389	0	0%
1969	543	537	522	501	510	0	0%
1970	495	449	405	376	384	0	0%
1971	481	447	396	368	376	0	0%
1972	471	432	389	369	378	0	0%
1973	506	465	418	389	399	0	0%
1974	524	499	464	437	442	0	0%
1975	521	497	449	417	422	0	0%
1976	460	409	387	352	361	1	20%
1977	415	397	365	341	353	2	40%
1978	539	505	446	424	428	0	0%
1979	501	465	412	382	392	0	0%
1980	538	503	457	437	440	0	0%
1981	490	445	395	352	366	1	20%
1982	538	527	499	475	481	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	427	396	352	367	1	20%
1986	529	497	421	396	401	0	0%
1987	467	442	403	365	368	0	0%
1988	438	409	387	352	360	2	40%
1989	442	417	391	353	374	1	20%
1990	432	409	387	352	362	1	20%
1991	432	405	387	352	362	1	20%

Average Percentage 29 8%
Percent Availability During Recreation Season 92%

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	421	396	401	0	0%
1923	463	416	380	348	367	1	20%
1924	450	433	410	399	406	0	0%
1925	473	425	387	343	354	2	40%
1926	447	430	397	357	366	1	20%
1927	502	456	407	378	386	0	0%
1928	504	455	415	396	403	0	0%
1929	453	412	372	342	355	2	40%
1930	479	435	397	363	379	0	0%
1931	440	422	400	389	397	0	0%
1932	487	435	397	365	379	0	0%
1933	436	407	378	365	381	0	0%
1934	476	443	402	372	370	0	0%
1935	498	458	410	388	396	0	0%
1936	502	461	415	389	395	0	0%
1937	521	478	415	389	395	0	0%
1938	543	532	505	471	475	0	0%
1939	473	432	397	359	366	1	20%
1940	483	444	400	378	385	0	0%
1941	534	524	470	434	445	0	0%
1942	536	524	471	436	444	0	0%
1943	542	492	425	399	406	0	0%
1944	471	432	397	352	361	1	20%
1945	473	437	392	365	374	0	0%
1946	471	433	397	375	382	0	0%
1947	464	432	397	358	367	1	20%
1948	414	391	375	364	374	0	0%
1949	458	426	388	344	359	2	40%
1950	443	410	393	377	388	0	0%
1951	512	465	418	390	399	0	0%
1952	543	537	516	498	507	0	0%
1953	505	473	415	389	395	0	0%
1954	492	448	400	374	381	0	0%
1955	444	417	386	350	362	1	20%
1956	526	502	444	413	417	0	0%
1957	500	458	411	383	391	0	0%
1958	532	522	488	464	471	0	0%
1959	495	454	404	381	387	0	0%
1960	464	430	397	352	359	2	40%
1961	457	424	387	349	360	2	40%
1962	480	443	396	377	386	0	0%
1963	508	468	421	392	401	0	0%
1964	457	432	397	352	361	1	20%
1965	520	473	410	384	389	0	0%
1966	483	449	413	399	408	0	0%
1967	543	533	513	490	495	0	0%
1968	495	450	402	377	385	0	0%
1969	543	534	519	496	505	0	0%
1970	495	449	405	376	384	0	0%
1971	478	444	396	364	376	0	0%
1972	460	421	396	379	388	0	0%
1973	509	465	418	389	399	0	0%
1974	524	495	460	432	438	0	0%
1975	521	495	447	414	419	0	0%
1976	452	400	372	342	355	2	40%
1977	415	399	369	349	362	1	20%
1978	540	506	436	413	417	0	0%
1979	496	459	412	382	392	0	0%
1980	536	500	446	424	428	0	0%
1981	481	432	385	336	352	2	40%
1982	531	520	488	464	470	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	428	397	352	362	1	20%
1986	526	494	421	396	401	0	0%
1987	467	443	405	369	372	0	0%
1988	440	400	372	342	359	2	40%
1989	439	413	384	350	370	1	20%
1990	429	400	372	342	351	2	40%
1991	430	400	372	342	358	2	40%
Average Percentage						30	9%
Percent Availability During Recreation Season						91%	

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	Months					% of Season
	MAY	JUN	JUL	AUG	SEP	
1922	490	480	427	403	409	0
1923	468	426	387	356	374	20%
1924	443	427	408	399	406	0%
1925	482	413	372	333	352	2
1926	452	418	384	357	379	40%
1927	505	459	411	383	391	1
1928	517	457	409	383	380	0
1929	441	409	372	347	360	2
1930	489	447	412	383	398	0
1931	463	433	407	390	394	0
1932	481	426	374	342	358	2
1933	437	413	384	372	381	0
1934	482	451	412	382	375	0%
1935	513	482	403	376	377	0%
1936	485	448	403	376	381	0
1937	506	464	403	372	377	0
1938	543	532	500	460	463	0
1939	475	428	382	343	362	1
1940	499	464	409	385	395	0
1941	543	529	466	428	433	0
1942	536	524	458	421	426	0
1943	540	489	421	394	401	0
1944	471	426	376	342	358	2
1945	478	445	403	375	379	0%
1946	482	452	403	376	374	0%
1947	458	416	372	342	366	1
1948	439	421	397	366	396	0
1949	461	417	375	343	368	1
1950	463	438	403	390	400	0
1951	519	470	409	380	392	0
1952	543	537	516	491	500	0
1953	504	473	415	388	395	0
1954	496	457	409	383	384	0
1955	465	422	384	352	372	1
1956	537	513	479	427	432	0
1957	502	457	409	381	387	0
1958	535	525	484	458	464	0
1959	499	457	403	376	384	0
1960	452	406	372	358	374	1
1961	476	428	372	342	360	2
1962	495	457	403	376	378	0
1963	509	489	421	392	401	0
1964	470	436	401	365	382	0
1965	532	487	431	396	401	0
1966	493	457	403	376	376	0
1967	538	527	507	478	483	0%
1968	499	457	403	376	374	0%
1969	536	527	503	472	481	0%
1970	496	449	405	376	384	0%
1971	478	444	396	364	376	0
1972	460	429	403	376	376	0
1973	507	457	409	379	389	0
1974	526	492	450	414	420	0
1975	521	494	431	397	402	0
1976	450	409	372	342	355	2
1977	413	397	366	346	359	2
1978	539	505	476	435	403	40%
1979	490	457	403	376	375	0%
1980	539	505	450	428	433	0
1981	489	432	380	342	362	1
1982	543	533	493	466	471	0
1983	543	538	526	518	532	0
1984	499	457	411	381	390	0
1985	451	409	372	342	361	1
1986	534	502	424	400	405	0
1987	481	451	417	386	381	0
1988	437	404	374	342	355	2
1989	449	409	372	342	371	1
1990	429	400	372	342	356	2
1991	450	409	390	404	404	0
					Average Percentage	28
					Percent Availability During Recreation Season	92%

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Flow Evaluation Study Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	420	396	401	0	0%
1923	465	418	383	352	368	1	20%
1924	452	437	418	410	416	0	0%
1925	472	425	383	336	352	2	40%
1926	457	429	387	349	363	1	20%
1927	505	459	411	383	391	0	0%
1928	508	459	409	389	397	0	0%
1929	446	403	369	337	349	2	40%
1930	478	436	402	372	389	0	0%
1931	453	437	416	406	414	0	0%
1932	485	434	388	354	372	1	20%
1933	434	407	371	357	374	1	20%
1934	474	441	400	364	360	1	20%
1935	492	452	403	382	390	0	0%
1936	500	459	403	375	382	0	0%
1937	514	471	403	375	382	0	0%
1938	542	531	504	470	473	0	0%
1939	466	429	383	347	354	2	40%
1940	483	445	402	382	390	0	0%
1941	538	525	471	435	446	0	0%
1942	536	524	469	431	438	0	0%
1943	542	492	421	395	402	0	0%
1944	466	429	383	341	352	2	40%
1945	469	431	392	363	371	0	0%
1946	475	441	399	378	386	0	0%
1947	460	429	383	347	358	2	40%
1948	416	395	381	373	383	0	0%
1949	468	429	388	353	370	1	20%
1950	459	427	399	380	389	0	0%
1951	509	464	409	379	388	0	0%
1952	538	531	509	492	501	0	0%
1953	506	474	415	389	395	0	0%
1954	492	448	400	374	381	0	0%
1955	450	429	383	347	362	1	20%
1956	537	513	457	426	430	0	0%
1957	503	461	409	380	388	0	0%
1958	531	521	487	463	469	0	0%
1959	495	455	403	379	386	0	0%
1960	465	429	383	347	359	2	40%
1961	467	434	383	347	361	1	20%
1962	478	440	392	372	381	0	0%
1963	505	465	418	390	399	0	0%
1964	457	429	383	347	358	2	40%
1965	526	480	417	393	398	0	0%
1966	488	453	403	386	395	0	0%
1967	543	533	513	490	495	0	0%
1968	498	455	403	379	386	0	0%
1969	543	537	519	494	503	0	0%
1970	495	449	405	376	384	0	0%
1971	480	448	402	374	386	0	0%
1972	468	430	400	381	389	0	0%
1973	508	465	409	379	388	0	0%
1974	518	486	449	420	426	0	0%
1975	515	488	439	405	410	0	0%
1976	449	396	369	337	353	2	40%
1977	409	393	362	340	349	2	40%
1978	536	501	430	407	412	0	0%
1979	497	460	403	371	382	0	0%
1980	529	493	440	418	422	0	0%
1981	490	437	383	346	362	1	20%
1982	542	532	499	476	481	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	429	383	347	360	2	40%
1986	534	502	427	403	408	0	0%
1987	467	441	392	364	368	0	0%
1988	431	393	369	337	350	2	40%
1989	452	429	383	347	372	1	20%
1990	426	391	369	337	353	2	40%
1991	439	413	381	353	370	1	20%
Average Percentage						35	10%
Percent Availability During Recreation Season						90%	

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 360 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	523	515	455	417	422	0	0%
1923	492	453	398	370	376	0	0%
1924	438	418	393	359	371	1	20%
1925	479	432	391	343	352	2	40%
1926	440	416	394	352	360	2	40%
1927	517	481	416	379	385	0	0%
1928	511	460	411	391	398	0	0%
1929	437	400	372	340	349	2	40%
1930	469	432	397	358	371	1	20%
1931	436	416	390	375	380	0	0%
1932	487	436	397	365	382	0	0%
1933	434	400	372	347	365	1	20%
1934	466	432	390	354	369	1	20%
1935	502	452	399	375	382	0	0%
1936	524	484	420	381	387	0	0%
1937	540	489	417	390	395	0	0%
1938	543	538	529	514	519	0	0%
1939	469	432	397	352	358	2	40%
1940	490	443	399	376	384	0	0%
1941	533	528	488	467	485	0	0%
1942	537	532	495	475	490	0	0%
1943	543	503	440	416	421	0	0%
1944	486	432	393	348	354	2	40%
1945	494	445	391	363	370	0	0%
1946	496	448	397	375	382	0	0%
1947	458	418	383	341	352	2	40%
1948	397	367	345	333	368	2	40%
1949	457	427	391	350	363	1	20%
1950	450	414	391	373	383	0	0%
1951	506	454	406	379	385	0	0%
1952	536	531	513	500	503	0	0%
1953	517	498	457	432	444	0	0%
1954	503	449	401	376	382	0	0%
1955	442	412	378	337	354	2	40%
1956	535	518	480	458	469	0	0%
1957	510	459	412	387	392	0	0%
1958	533	528	507	494	498	0	0%
1959	505	459	408	384	390	0	0%
1960	459	420	383	338	352	2	40%
1961	443	419	393	352	363	1	20%
1962	481	442	391	367	375	0	0%
1963	513	477	411	379	385	0	0%
1964	451	413	387	352	357	2	40%
1965	510	462	402	375	381	0	0%
1966	503	460	415	401	409	0	0%
1967	543	538	529	516	519	0	0%
1968	508	459	408	383	389	0	0%
1969	543	538	529	516	519	0	0%
1970	509	460	413	387	392	0	0%
1971	497	471	424	392	407	0	0%
1972	487	445	399	380	388	0	0%
1973	523	466	418	394	399	0	0%
1974	528	511	487	470	482	0	0%
1975	527	505	469	450	461	0	0%
1976	475	417	372	340	353	2	40%
1977	405	388	355	337	350	3	60%
1978	536	514	463	433	452	0	0%
1979	524	470	412	387	392	0	0%
1980	543	520	491	469	486	0	0%
1981	477	427	390	346	356	2	40%
1982	535	530	509	493	502	0	0%
1983	543	538	529	523	532	0	0%
1984	514	463	413	388	393	0	0%
1985	471	430	397	352	359	2	40%
1986	529	503	427	396	401	0	0%
1987	462	431	397	352	357	2	40%
1988	429	400	372	342	357	2	40%
1989	440	412	387	352	374	1	20%
1990	429	400	372	342	356	2	40%
1991	429	400	372	342	353	2	40%
Average Percentage						44	13%
Percent Availability During Recreation Season						87%	

San Luis Reservoir 340 msl
Recreation Activity Threshold

C - 0 9 2 9 0 3

C-092903

SAN LUIS RESERVOIR

San Luis Elevation (ft)
No Action

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	422	398	403	0	0%
1923	462	415	379	348	366	0	0%
1924	450	433	412	402	408	0	0%
1925	473	425	387	343	356	0	0%
1926	443	423	397	354	363	0	0%
1927	498	452	402	372	381	0	0%
1928	501	452	410	391	399	0	0%
1929	447	404	372	342	354	0	0%
1930	479	435	397	363	379	0	0%
1931	440	422	399	389	397	0	0%
1932	487	435	397	365	379	0	0%
1933	436	407	378	365	381	0	0%
1934	476	447	410	383	380	0	0%
1935	502	460	408	383	390	0	0%
1936	494	453	409	382	389	0	0%
1937	518	475	415	389	395	0	0%
1938	543	532	508	478	481	0	0%
1939	473	432	397	359	365	0	0%
1940	483	444	400	378	385	0	0%
1941	534	525	471	436	447	0	0%
1942	536	524	471	436	444	0	0%
1943	542	492	436	411	418	0	0%
1944	475	432	397	352	361	0	0%
1945	471	435	392	365	374	0	0%
1946	471	433	397	375	382	0	0%
1947	463	432	397	356	366	0	0%
1948	422	401	385	368	378	0	0%
1949	457	424	383	333	352	1	20%
1950	445	417	396	383	393	0	0%
1951	513	465	418	390	399	0	0%
1952	543	537	516	498	507	0	0%
1953	506	479	419	389	395	0	0%
1954	493	448	400	374	381	0	0%
1955	438	412	378	336	353	1	20%
1956	528	507	458	422	426	0	0%
1957	504	462	415	388	395	0	0%
1958	535	525	490	467	473	0	0%
1959	495	455	405	381	388	0	0%
1960	464	427	392	351	358	0	0%
1961	455	422	385	347	359	0	0%
1962	479	444	400	383	392	0	0%
1963	513	474	429	402	411	0	0%
1964	457	430	397	352	358	0	0%
1965	517	470	405	379	384	0	0%
1966	485	453	415	402	409	0	0%
1967	543	533	513	490	495	0	0%
1968	495	450	402	377	385	0	0%
1969	543	536	521	500	508	0	0%
1970	495	449	405	376	384	0	0%
1971	478	444	396	364	376	0	0%
1972	466	428	396	379	388	0	0%
1973	510	465	418	389	399	0	0%
1974	524	499	464	437	442	0	0%
1975	521	497	449	417	422	0	0%
1976	458	401	372	342	356	0	0%
1977	415	399	369	349	362	0	0%
1978	540	506	440	418	422	0	0%
1979	496	459	412	382	392	0	0%
1980	537	501	457	437	440	0	0%
1981	484	436	389	343	355	0	0%
1982	531	520	492	468	473	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	426	397	352	361	0	0%
1986	525	492	421	396	401	0	0%
1987	467	443	404	367	368	0	0%
1988	440	400	372	342	357	0	0%
1989	439	413	384	350	370	0	0%
1990	428	400	372	342	350	0	0%
1991	432	400	372	342	359	0	0%
						2	1%
						99%	

Percent Availability During Recreation Season

SAN LUIS RESERVOIR

San Luis Elevation (ft)
State Permit Alternative

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	429	406	411	0	0%
1923	470	422	386	353	370	0	0%
1924	446	425	402	388	394	0	0%
1925	477	427	385	334	352	1	20%
1926	440	419	397	352	367	0	0%
1927	499	452	403	373	382	0	0%
1928	503	453	411	392	399	0	0%
1929	441	409	386	352	361	0	0%
1930	474	432	397	360	375	0	0%
1931	439	416	387	368	376	0	0%
1932	481	432	397	363	377	0	0%
1933	437	411	387	358	367	0	0%
1934	470	437	397	366	376	0	0%
1935	496	455	405	381	388	0	0%
1936	495	454	411	384	390	0	0%
1937	519	476	415	389	395	0	0%
1938	543	532	508	478	481	0	0%
1939	475	432	397	360	371	0	0%
1940	483	442	397	375	382	0	0%
1941	532	523	469	433	444	0	0%
1942	536	524	471	436	444	0	0%
1943	542	492	436	411	418	0	0%
1944	472	432	393	348	357	0	0%
1945	474	438	387	359	369	0	0%
1946	463	422	391	366	378	0	0%
1947	457	430	397	357	370	0	0%
1948	414	391	374	364	374	0	0%
1949	458	427	392	351	365	0	0%
1950	451	420	394	376	386	0	0%
1951	510	464	417	389	397	0	0%
1952	543	537	515	497	506	0	0%
1953	506	481	420	389	395	0	0%
1954	496	448	400	374	381	0	0%
1955	439	412	379	337	356	1	20%
1956	527	507	458	423	427	0	0%
1957	504	462	415	388	396	0	0%
1958	535	525	490	467	473	0	0%
1959	495	455	405	382	388	0	0%
1960	465	428	393	352	362	0	0%
1961	464	433	397	352	363	0	0%
1962	486	446	397	376	384	0	0%
1963	505	462	412	384	392	0	0%
1964	450	422	392	352	359	0	0%
1965	515	468	403	376	382	0	0%
1966	491	457	415	401	409	0	0%
1967	543	533	513	490	495	0	0%
1968	498	455	405	382	389	0	0%
1969	543	537	522	501	510	0	0%
1970	495	449	405	376	384	0	0%
1971	481	447	396	368	376	0	0%
1972	471	432	389	369	378	0	0%
1973	506	465	418	389	399	0	0%
1974	524	499	464	437	442	0	0%
1975	521	497	449	417	422	0	0%
1976	460	409	387	352	361	0	0%
1977	415	397	365	341	353	0	0%
1978	539	505	446	424	428	0	0%
1979	501	465	412	382	392	0	0%
1980	538	503	457	437	440	0	0%
1981	490	445	395	352	366	0	0%
1982	538	527	499	475	481	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	427	396	352	367	0	0%
1986	529	497	421	396	401	0	0%
1987	467	442	403	365	368	0	0%
1988	438	409	387	352	360	0	0%
1989	442	417	391	353	374	0	0%
1990	432	409	387	352	362	0	0%
1991	432	405	387	352	362	0	0%
Average Percentage						2	1%
Percent Availability During Recreation Season						99%	

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Percent Inflow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	421	396	401	0	0%
1923	463	416	380	348	367	0	0%
1924	450	433	410	399	406	0	0%
1925	473	425	387	343	354	0	0%
1926	447	430	397	357	366	0	0%
1927	502	456	407	378	386	0	0%
1928	504	455	415	396	403	0	0%
1929	453	412	372	342	355	0	0%
1930	479	435	397	363	379	0	0%
1931	440	422	400	389	397	0	0%
1932	487	435	397	365	379	0	0%
1933	436	407	378	365	381	0	0%
1934	476	443	402	372	370	0	0%
1935	498	458	410	388	396	0	0%
1936	502	461	415	389	395	0	0%
1937	521	478	415	389	395	0	0%
1938	543	532	505	471	475	0	0%
1939	473	432	397	359	366	0	0%
1940	483	444	400	378	385	0	0%
1941	534	524	470	434	445	0	0%
1942	536	524	471	436	444	0	0%
1943	542	492	425	399	406	0	0%
1944	471	432	397	352	361	0	0%
1945	473	437	392	365	374	0	0%
1946	471	433	397	375	382	0	0%
1947	464	432	397	358	367	0	0%
1948	414	391	375	364	374	0	0%
1949	458	426	388	344	359	0	0%
1950	443	410	393	377	388	0	0%
1951	512	465	418	390	399	0	0%
1952	543	537	516	498	507	0	0%
1953	505	473	415	389	395	0	0%
1954	492	448	400	374	381	0	0%
1955	444	417	386	350	362	0	0%
1956	526	502	444	413	417	0	0%
1957	500	458	411	383	391	0	0%
1958	532	522	488	464	471	0	0%
1959	495	454	404	381	387	0	0%
1960	464	430	397	352	359	0	0%
1961	457	424	387	349	360	0	0%
1962	480	443	396	377	386	0	0%
1963	508	468	421	392	401	0	0%
1964	457	432	397	352	361	0	0%
1965	520	473	410	384	389	0	0%
1966	483	449	413	399	408	0	0%
1967	543	533	513	490	495	0	0%
1968	495	450	402	377	385	0	0%
1969	543	534	519	496	505	0	0%
1970	495	449	405	376	384	0	0%
1971	478	444	396	364	376	0	0%
1972	460	421	396	379	388	0	0%
1973	509	465	418	389	399	0	0%
1974	524	495	460	432	438	0	0%
1975	521	495	447	414	419	0	0%
1976	452	400	372	342	355	0	0%
1977	415	399	369	349	362	0	0%
1978	540	506	436	413	417	0	0%
1979	496	459	412	382	392	0	0%
1980	536	500	446	424	428	0	0%
1981	481	432	385	336	352	1	20%
1982	531	520	488	464	470	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	428	397	352	362	0	0%
1986	526	494	421	396	401	0	0%
1987	467	443	405	369	372	0	0%
1988	440	400	372	342	359	0	0%
1989	439	413	384	350	370	0	0%
1990	429	400	372	342	351	0	0%
1991	430	400	372	342	358	0	0%

Average Percentage 1 0%
Percent Availability During Recreation Season 100%

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Revised Max Flow Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	490	480	427	403	409	0	0%
1923	468	426	387	356	374	0	0%
1924	443	427	408	399	406	0	0%
1925	482	413	372	333	352	1	20%
1926	452	418	384	357	379	0	0%
1927	505	459	411	383	391	0	0%
1928	517	457	409	383	380	0	0%
1929	441	409	372	347	360	0	0%
1930	489	447	412	383	398	0	0%
1931	453	433	407	390	394	0	0%
1932	481	426	374	342	358	0	0%
1933	437	413	384	372	381	0	0%
1934	482	451	412	382	375	0	0%
1935	513	462	403	376	377	0	0%
1936	485	448	403	376	381	0	0%
1937	506	464	403	372	377	0	0%
1938	543	532	500	460	463	0	0%
1939	475	428	382	343	362	0	0%
1940	499	464	409	385	395	0	0%
1941	543	529	466	428	433	0	0%
1942	536	524	458	421	426	0	0%
1943	540	489	421	394	401	0	0%
1944	471	426	376	342	358	0	0%
1945	478	445	403	375	379	0	0%
1946	482	452	403	376	374	0	0%
1947	458	416	372	342	366	0	0%
1948	439	421	397	386	396	0	0%
1949	461	417	375	343	368	0	0%
1950	463	438	403	390	400	0	0%
1951	519	470	409	380	392	0	0%
1952	543	537	516	491	500	0	0%
1953	504	473	415	388	395	0	0%
1954	496	457	409	383	384	0	0%
1955	465	422	384	352	372	0	0%
1956	537	513	449	427	432	0	0%
1957	502	457	409	381	387	0	0%
1958	535	525	484	458	464	0	0%
1959	499	457	403	376	384	0	0%
1960	452	406	372	358	374	0	0%
1961	476	428	372	342	360	0	0%
1962	495	457	403	376	378	0	0%
1963	509	469	421	392	401	0	0%
1964	470	436	401	365	382	0	0%
1965	532	487	421	396	401	0	0%
1966	493	457	403	376	376	0	0%
1967	538	527	507	478	483	0	0%
1968	499	457	403	376	374	0	0%
1969	536	527	503	472	481	0	0%
1970	496	449	405	376	384	0	0%
1971	478	444	396	364	376	0	0%
1972	460	429	403	376	376	0	0%
1973	507	457	409	379	389	0	0%
1974	523	492	450	414	420	0	0%
1975	521	494	431	397	402	0	0%
1976	450	409	372	342	355	0	0%
1977	413	397	366	346	359	0	0%
1978	539	505	435	403	407	0	0%
1979	490	457	403	376	375	0	0%
1980	539	505	450	428	433	0	0%
1981	489	432	380	342	362	0	0%
1982	543	533	493	466	471	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	451	409	372	342	361	0	0%
1986	534	502	424	400	405	0	0%
1987	481	451	417	386	381	0	0%
1988	437	404	374	342	355	0	0%
1989	449	409	372	342	371	0	0%
1990	429	400	372	342	356	0	0%
1991	450	430	409	390	404	0	0%

Average Percentage

Percent Availability During Recreation Season

1 0%

100%

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Flow Evaluation Study Alternative**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	489	476	420	396	401	0	0%
1923	465	418	383	352	368	0	0%
1924	452	437	418	410	416	0	0%
1925	472	425	383	336	352	1	20%
1926	457	429	387	349	363	0	0%
1927	505	459	411	383	391	0	0%
1928	508	459	409	389	397	0	0%
1929	446	403	369	337	349	1	20%
1930	478	436	402	372	389	0	0%
1931	453	437	416	406	414	0	0%
1932	485	434	388	354	372	0	0%
1933	434	407	371	357	374	0	0%
1934	474	441	400	364	360	0	0%
1935	492	452	403	382	390	0	0%
1936	500	459	403	375	382	0	0%
1937	514	471	403	375	382	0	0%
1938	542	531	504	470	473	0	0%
1939	466	429	383	347	354	0	0%
1940	483	445	402	382	390	0	0%
1941	538	525	471	435	446	0	0%
1942	536	524	469	431	438	0	0%
1943	542	492	421	395	402	0	0%
1944	466	429	383	341	352	0	0%
1945	469	431	392	363	371	0	0%
1946	475	441	399	378	386	0	0%
1947	460	429	383	347	358	0	0%
1948	416	395	381	373	383	0	0%
1949	468	429	388	353	370	0	0%
1950	459	427	399	360	389	0	0%
1951	509	464	409	379	388	0	0%
1952	538	531	509	492	501	0	0%
1953	506	474	415	389	395	0	0%
1954	492	448	400	374	381	0	0%
1955	450	429	383	347	362	0	0%
1956	537	513	457	426	430	0	0%
1957	503	461	409	380	388	0	0%
1958	531	521	487	463	469	0	0%
1959	495	455	403	379	386	0	0%
1960	465	429	383	347	359	0	0%
1961	467	434	383	347	361	0	0%
1962	478	440	392	372	381	0	0%
1963	505	465	418	390	399	0	0%
1964	457	429	383	347	358	0	0%
1965	526	480	417	393	398	0	0%
1966	488	453	403	386	395	0	0%
1967	543	533	513	490	495	0	0%
1968	498	455	403	379	386	0	0%
1969	543	537	519	494	503	0	0%
1970	495	449	405	376	384	0	0%
1971	480	448	402	374	386	0	0%
1972	468	430	400	381	389	0	0%
1973	508	465	409	379	388	0	0%
1974	518	486	449	420	426	0	0%
1975	515	488	439	405	410	0	0%
1976	449	396	369	337	353	1	20%
1977	409	393	362	340	349	1	20%
1978	536	501	430	407	412	0	0%
1979	497	460	403	371	382	0	0%
1980	529	493	440	418	422	0	0%
1981	490	437	383	346	362	0	0%
1982	542	532	499	476	481	0	0%
1983	543	538	526	518	532	0	0%
1984	499	457	411	381	390	0	0%
1985	457	429	383	347	360	0	0%
1986	534	502	427	403	408	0	0%
1987	467	441	392	364	368	0	0%
1988	431	393	369	337	350	1	20%
1989	452	429	383	347	372	0	0%
1990	426	391	369	337	353	1	20%
1991	439	413	381	353	370	0	0%
Average Percentage						6	2%
Percent Availability During Recreation Season						98%	

SAN LUIS RESERVOIR

**San Luis Elevation (ft)
Existing Conditions**

On average, during how many of these months (recreation season May - Sept.) does the reservoir drop below 340 msl?

Year	MAY	JUN	JUL	AUG	SEP	Months	% of Season
1922	523	515	455	417	422	0	0%
1923	492	453	398	370	376	0	0%
1924	438	418	393	359	371	0	0%
1925	479	432	391	343	352	0	0%
1926	440	416	394	352	360	0	0%
1927	517	481	416	379	385	0	0%
1928	511	460	411	391	398	0	0%
1929	437	400	372	340	349	1	20%
1930	469	432	397	358	371	0	0%
1931	436	416	390	375	380	0	0%
1932	487	436	397	365	382	0	0%
1933	434	400	372	347	365	0	0%
1934	466	432	390	354	369	0	0%
1935	502	452	399	375	382	0	0%
1936	524	484	420	381	387	0	0%
1937	540	489	417	390	395	0	0%
1938	543	538	529	514	519	0	0%
1939	469	432	397	352	358	0	0%
1940	490	443	399	376	384	0	0%
1941	533	528	488	467	485	0	0%
1942	537	532	495	475	490	0	0%
1943	543	503	440	416	421	0	0%
1944	486	432	393	348	354	0	0%
1945	494	445	391	363	370	0	0%
1946	496	448	397	375	382	0	0%
1947	458	418	383	341	352	0	0%
1948	397	367	345	333	368	1	20%
1949	457	427	391	350	363	0	0%
1950	450	414	391	373	383	0	0%
1951	506	454	406	379	385	0	0%
1952	536	531	513	500	503	0	0%
1953	517	498	457	432	444	0	0%
1954	503	449	401	376	382	0	0%
1955	442	412	378	337	354	1	20%
1956	535	518	480	458	469	0	0%
1957	510	459	412	387	392	0	0%
1958	533	528	507	494	498	0	0%
1959	505	459	408	384	390	0	0%
1960	459	420	383	338	352	1	20%
1961	443	419	393	352	363	0	0%
1962	481	442	391	367	375	0	0%
1963	513	477	411	379	385	0	0%
1964	451	413	387	352	357	0	0%
1965	510	462	402	375	381	0	0%
1966	503	460	415	401	409	0	0%
1967	543	538	529	516	519	0	0%
1968	508	459	408	383	389	0	0%
1969	543	538	529	516	519	0	0%
1970	509	460	413	387	392	0	0%
1971	497	471	424	392	407	0	0%
1972	487	445	399	380	388	0	0%
1973	523	466	418	394	399	0	0%
1974	528	511	487	470	482	0	0%
1975	527	505	469	450	461	0	0%
1976	475	417	372	340	353	1	20%
1977	405	388	355	337	350	1	20%
1978	536	514	463	433	452	0	0%
1979	524	470	412	387	392	0	0%
1980	543	520	491	469	486	0	0%
1981	477	427	390	346	356	0	0%
1982	535	530	509	493	502	0	0%
1983	543	538	529	523	532	0	0%
1984	514	463	413	388	393	0	0%
1985	471	430	397	352	359	0	0%
1986	529	503	427	396	401	0	0%
1987	462	431	397	352	357	0	0%
1988	429	400	372	342	357	0	0%
1989	440	412	387	352	374	0	0%
1990	429	400	372	342	356	0	0%
1991	429	400	372	342	353	0	0%
Average Percentage						6	2%
Percent Availability During Recreation Season						98%	